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CYPRIPEDIUM MONTANUM H.R. WHITE

ALBERTA NATURALIST

VOLUME 9 SUPPLEMENT NUMBER 1 MAY, 1979

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ENDANGERED - CYPRIPEDIUM MONTANUM

by Helene R. White
310, 3210 23rd Avenue South
Lethbridge, Alberta

This plant is just one of many listed in The Rare Vascular Plants of Alberta (George W. Argus and David J. White, Botany Division, National Museum of Natural Sciences, Ottawa). Happily, though, these particular White Lady's Slippers are jealously guarded and carefully tended. Each fall after all vegetation has died back, the plants are carefully covered with chicken wire to protect the new spring growth from browsing critters. Add to this the fact they are in their natural habitat and on private property, and one can be very optimistic about their survival.

Sad to say, many other plants are endangered by all governments that designate an area as a park or preserve, throw it open to the public and allow them to run amok. Education by means of large signs, pamphlets (like the Bear Country warnings) and ENFORCED hefty fines to back up the "No Picking" rule would certainly help to deter most pluckers, thereby prolonging the life of many plants and the beauty of the area.

Until such concrete action is taken, I will continue to shudder each time a government takes a unique or beautiful piece of land under its wing so the "public" can have access - the site is almost certainly doomed.

FROM THE EDITORS

It is planned to publish a supplement to the regular Alberta Naturalist each spring. This has become necessary not only because of the increasing amount of relatively "scientific", specialized material - which, admittedly, makes for "dry" reading - we have been receiving, but also because of the large amount of other material we have been fortunate enough to receive. In short, the supply of material has outstripped our available page space; a favourable position for an editor to report! It is felt by FAN Executive and Directors that not all AN readers are interested in the more scientific type of material.

Reports on FAN's phenology project, Alberta Christmas Bird Counts and May Day Count results will appear in the annual supplement, rather than in regular issues of the AN. In the future, brief summaries of these articles will appear in the regular issues.

Because this supplement does cost the Federation money and we are not increasing membership fees to cover this additional expense, we ask that when you renew your membership, please indicate in the space provided (see last page of this issue) if you do not wish to receive this supplement. Otherwise, all members will automatically receive the supplement as well as regular issues of the AN.

1978 ALBERTA FLOWERING DATES

by C.D. Bird
Department of Biology
University of Calgary, Calgary, Alberta

and

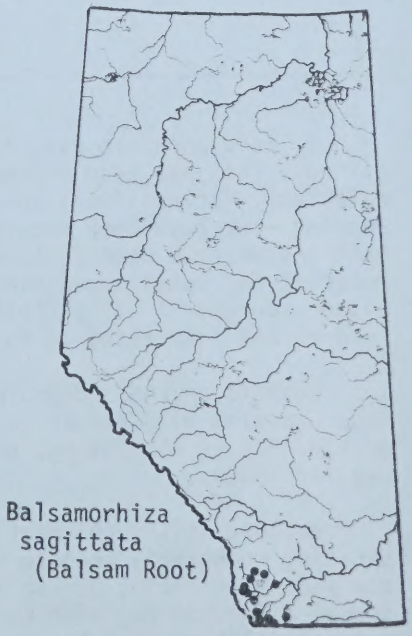
A.H. Marsh
Department of Biology
University of Calgary, Calgary, Alberta

The FAN Phenology Project has now completed its sixth year of operation. Summaries of the data obtained from 1973-1977 are in the Alberta Naturalist (4:7-14; 5:4-23; 6:3-27; 7:11-19; 8:9-26).

120 people took part in 1978, and coverage was generally good except for the infrequently visited and sparsely populated northern third of the province.

The distribution maps scattered throughout the text show the localities at which the species have been observed over the six years the FAN phenology study has taken place. They are the first reasonably thorough maps of these species for the province and as such they illustrate one of the useful by-products of the study.

The following Table presents flowering dates from twenty-five areas. These areas, and the locations from which there are 1978 observations, are: Waterton Lakes National Park - Bertha Lake Trail, Blakiston Falls, Carthew Lakes Trail, Chief Mountain Highway, Red Rock Canyon; Milk River - Writing-on-Stone Provincial Park; Cardston - Beazer, Mountain View, Police Outpost Provincial Park; Crowsnest Pass - Bellevue, Burmis, Coleman, Crowsnest Pass, Frank, Lundbreck, Star Creek, Upper Pincher Creek; Lethbridge - Fort Macleod, Lethbridge, Six Mile Coulee; Medicine Hat - Bassano, Kinbrook Provincial Park; Porcupine Hills - A7 Ranch, Claresholm, High River, Pine Coulee, Porcupine Hills, Skyline Trail, Squaw Coulee, Stavely; Turner Valley - Black Diamond, Bragg Creek, Brown-Lowery Natural Area; Chinook Ranch, Longview, Millarville, Priddis; Bow-Crow Forest Reserve - Barrier Lake, Elbow Lake, Evans-Thomas Creek, Highwood House, Kananaskis Lakes, Plateau Mountain; Calgary - Bearspaw Dam, Calgary, Cochrane, Conrich, Copithorne Ridge, Dogpound, Ghost River, Kathyrn, Morley; Canmore - Bow Valley Provincial Park, Canmore, Exshaw, Pigeon Mountain, Seebe, Yamnuska Natural Area; Drumheller - Beiseker, Beynon, Carseland, Dorothy, Dowling Lake, Eagle



Balsamorhiza sagittata (Balsam Root)

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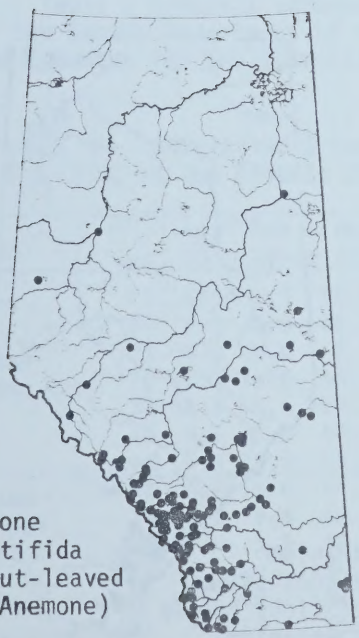
Elaeagnus commutata (Wolf Willow)



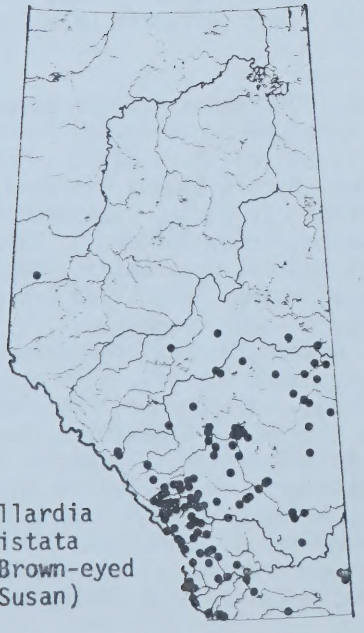
Anemone multifida (Cut-leaved Anemone)

Lake, Gatine, Indus, Rockyford, Stobart Lake; Banff National Park - Banff, Bankhead, Boom Lake, Bourgeau Lake, Cascade Valley, Ghost Lakes, Herbert Lake, Johnston Canyon, Lake Louise, Moraine Lake, Moquito Creek, Redearth Creek, Rockbound Lake; Red Deer - Bluffton, Dry Island Buffalo Jump Provincial Park, Lacombe, Red Deer; Rocky Mountain House - Caroline, Cremona, Keystone Hills, Lodgepole, Nordegg, Ricinus, Rocky Mountain House, Shunda Creek, Sundre, Waiparous Creek, Winfield, Ya-ha-tinda Ranch; Wainwright - Battle River Crossing, Czar, Dewberry, Dillberry Lake Provincial Park, Fabyan, Irma, Kinsella, Marwayne, Vermilion, Wainwright; Stettler - Bashaw, Big Valley, Botha, Buffalo Lake, Content Bridge, Erskine, Ewing Lake, Mirror, Nevis, Rochon Sands Provincial Park; Camrose - Bruce, Hay Lakes, Holden, Lavoy, Leduc, Pigeon Lake, Vegreville; Jasper National Park - Jasper; Edmonton - Beaverhill Lake, Cooking Lake, Edmonton, Elk Island National Park, Hastings Lake, Lac Ste. Anne, Ministik Lake, Redwater, Sherwood Park, Thorsby, Tofield, Wanisan Lake, Winterburn; Whitecourt - Fox Creek, Whitecourt, Whitecourt Mountain; Athabasca - Lesser Slave Lake, Swan Hills; Cold Lake - Lac la Biche, Round Hill Fire Tower, Smoky Lake; Peace River - Beaverlodge, Berwyn, Bezanson, Dimsdale, Fourth Creek, Grande Prairie, Kleskun Hills, Peace River, Rycroft, Saskatoon Lake Provincial Park, Wapiti and Smoky River junction, Wapiti and Redwillow Rivers junction, Wembley; Fort McMurray - Fort Chipewyan, Fort McMurray, GCOS Plant, Gregoire Lake Provincial Park.

The following 130 persons made observations during 1978: B. Adams, Roberta Adams, D. Allen, Elizabeth Allen, C. Bailey, Mary Bailey, Mary Barclay, M. Battrum, Myrtle Biggs, Ann Bird, C. Bird, Sheila Blackman, J. Boyle, Judy Branch, T. Branch, J. Brinkma, Betty Bulmer, R. Butot, B. Cantin, Frances Cantin, Anna Cairns, Vanny Case, Edith Clark, Margaret Cox, Ellen Craig, G. Craig, Elsie Cruickshank, Lorna Dahl, R. Dahl, Daphne Denton, S. Denton, D. Dew, the Dolmans, Marjorie Donaldson, Laura Dorrans, S. Dorrans, D. Downing, Sue Dragon, J. Fahrner, Kathleen Garrett, Marjorie Gibney, L. Gibault, D. de Graaf, G. Greenlee, Patricia Greenlee, R. Guy, B. Hall, Liz Hall, Beryl Hallworth, H. Hallworth, M. Hallworth, A. Hanners, Alice Harper, H. Harris, Ruth Harrowing, C. Harrowing, G. Henn, P.N. Hills, May Hills, Marion Horrocks, Hazel Hudson, Mary Hughes, D. Johnson, Helen Johnson, Edith Kathol,

Thermopsis rhombifolia (Golden Bean)

Maianthemum canadense (Wild Lily-of-the-valley)



Gaillardia aristata (Brown-eyed Susan)

Geranium viscosissimum (Sticky Purple Geranium)

Dryas drummondii (Yellow Dryas)

G. Kerr, Una Kilgour, A. Klar, G. Krumlik, H. Lahring, J. La Valley, A. Lees, Mary Lore, Mary MacAllister, W. MacAllister, Yvonne MacAllister, K. MacLennan, Lilian MacLennan, Virginia Maitland, Linda Matula, R. McNeil, Kay Morck, Shirley Nelson, E. Neufeld, A. Nicholson, Sandra Nicholson, Grace Norgard, Ruth Myberg, Mart Oliver, T. Oliver, Linda Olson, Maxine O'Riordan, Catherine Osborne, H. Pinel, Robina Polet, J. Posey, V. Posey, Ellen Purdmaa, Lynn Richards, J. Riddell, Rhoda Robertson, Ellen Sangster, R. Sangster, F. Schutz, K. Shaw, Shirley Shaw, B. Smith, Mary Smith, B. Tannas, C. Tannas, D. Tannas, Kathy Tannas, Ouida Touche, D. Wales, Joan Wales, Margaret Walker, G. White, Helene White, Marie-Ann White, Kathleen Wilkinson, C. Yauch, and S.C. Zoltai.

The data that we now have is sufficient to provide a guide to other phenological events. It may be helpful to farmers and ranchers, for example, to be able to judge the optimum time for planting various crops by observing the seasonal progression of the native vegetation on their land. Bird observers might know when to expect the return, or nesting, of various bird species by watching the sequence of flowering times. The entomologist is likely to find that insects emerge when the leaves or flowers upon which they lay their eggs or feed have begun to appear. The gardner may find that the optimum time for planting radishes and lettuce is when Early Blue Violets come into bloom, while the planting of the majority of vegetable seeds might better be delayed until Saskatoons or Choke Cherries are in flower.

Table 2 presents information obtained from the Monthly Meteorological Summary of the Canada Department of the Environment on the Growing Degree-days at Calgary and Edmonton for the last six years and also gives the average Growing-Degree days

TABLE 2. Cumulative Growing Degree-days (above 5°C) from April 1 to July 31, 1973-1978, at two Alberta Stations.

Station	yr	Apr 10	Apr 20	Apr 30	May 10	May 20	May 31	June 10	June 20	June 30	July 10	July 20	July 31
Calgary International Airport	73	4.5	9.5	11.8	40.1	122.9	200.6	263.9	341.1	458.9	560.6	680.7	821.3
	74	0.0	0.0	49.5	83.4	85.1	127.5	196.0	325.4	447.5	534.5	666.7	799.0
	75	0.0	0.0	7.9	20.2	73.6	122.4	199.7	263.1	351.6	500.0	633.0	763.8
	76	31.2	36.2	53.1	126.2	181.0	259.6	312.6	384.9	457.0	574.0	693.9	818.7
	77	38.5	48.4	109.1	167.1	199.6	257.6	359.6	454.0	564.1	655.6	745.3	887.3
	78	6.8	6.8	40.2	65.2	113.8	161.1	252.8	326.6	437.9	536.9	647.0	790.3
	avg	13.5	19.3	45.3	83.7	129.3	188.2	264.1	349.2	452.8	560.2	677.8	813.4
Edmonton Municipal Airport	73	8.9	19.0	26.7	65.0	167.8	271.1	360.0	454.5	583.8	699.3	828.7	970.8
	74	0.0	9.5	42.8	85.0	111.6	183.0	257.7	397.2	523.9	629.2	762.0	905.4
	75	0.0	5.5	29.3	71.5	140.9	214.1	310.8	402.9	511.9	683.1	826.9	969.7
	76	38.8	60.4	104.9	187.8	254.6	352.2	438.1	534.6	616.7	755.9	884.6	1016.8
	77	42.7	60.7	137.8	221.7	271.3	359.0	473.0	592.4	709.7	792.8	868.8	996.0
	78	7.4	14.0	71.6	119.8	195.6	264.6	387.6	483.5	621.3	747.0	868.9	1025.4
	avg	16.9	28.2	68.8	125.1	190.3	274.0	371.2	477.5	594.6	717.9	840.0	980.6

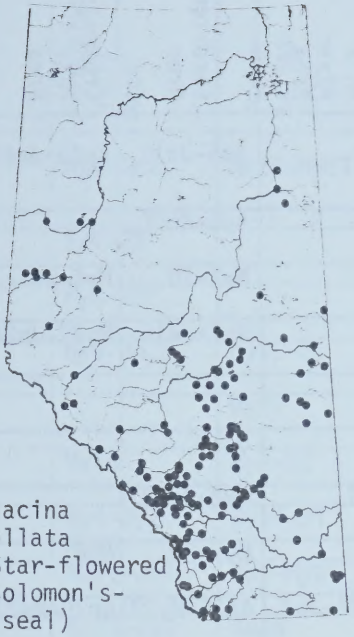
for this period. Data is given for only these two Stations as 1978 data is not yet available for other Stations in the province. Growing Degree-days are defined as the accumulated excess of the daily mean temperature above 5°C. Mean temperatures prior to April 1 are not regarded as playing a significant role in the development of plants in our area.

The Growing Degree-day information and that in Table 3 which gives 1978 and 6 year average first flowering dates for a select group of species and locations reveal that the season started out slowly, caught up by late April and from then on remained close to average. It is evident that the average dates presented in Table 3 are becoming increasingly more accurate.

TABLE 3. First flowering dates of the twelve best phenology species in six key Alberta areas.

	Lethbridge Area	Calgary Area	Canmore Area	Red Deer Area	Stettler Area	Edmonton Area	All six areas
Prairie Crocus 78	Ap 2	Ap 4	Ap 5	Ap 30	My 28	Ap 18	Ap 24
6 yr avg	Ap 12	Ap 15	Ap 15	Ap 17	Ap 14	Ap 16	Ap 12
Aspen 78		Ap 7	Ap 3	Ap 30	Ap 23	Ap 18	Ap 16
6 yr avg	Ap 4	Ap 6	Ap 15	Ap 30	Ap 16	Ap 15	Ap 14
Early Blue 78	My 14	My 3	Ap 24	My 30	Ap 3	Ap 30	Ap 27
Violet 6 yr avg	My 3	Ap 26	My 2	My 4	Ap 30	My 1	My 1
Golden Bean 78	My 6	Ap 30	My 7	My 13	Ap 29	My 17	My 7
6 yr avg	Ap 23	Ap 26	My 10	My 13	My 6	My 10	My 5
Saskatoon 78	My 6	My 12	My 22	My 20	My 17	My 13	My 15
6 yr avg	My 8	My 9	My 23	My 22	My 17	My 16	My 16
Star-flowered 78	My 13	My 20	My 22	My 27	My 27	My 26	My 27
Solomon's-seal avg	My 17	My 10	My 22	My 26	My 30	My 30	My 22
Choke Cherry 78	My 27	My 25	Jn 4	My 27	My 28	My 24	My 28
6 yr avg	My 22	My 23	Jn 6	My 29	My 26	My 21	My 26
Yellow Pea Vine 78		My 25	Jn 2	My 27	My 25	My 17	My 25
6 yr avg	Jn 4	My 30	Jn 3	Jn 3	My 30	My 26	My 31
Northern 78		Jn 6	Jn 10	Jn 25	Jn 16	Jn 7	Jn 13
Bedstraw 6 yr avg	Jn 16	Jn 5	Jn 12	Jn 17	Jn 8	Jn 12	Jn 12
Common Yarrow 78	Jn 9	My 31	Jn 10	Jn 25	Jn 16	Jn 15	Jn 13
6 yr avg	My 31	Jn 4	Jn 17	Jn 18	Jn 11	Jn 22	Jn 13
Western Wood 78		Jn 11	Jn 5		Jn 22	Jn 10	Jn 12
Lily 6 yr avg		Jn 18	Jn 14	Jn 24	Jn 24	Jn 26	Jn 21
Brown-eyed 78	Jn 9	Jn 17	Jn 17	Au 13	Jn 26	Jn 7	Jn 15
Susan 6 yr avg	Jn 6	Jn 16	Jn 19	Jy 6	Jn 26	Jy 7	Jn 23

One can see from our phenological reports that northern areas are slower in starting than those in the south because of later snow melt but, because they receive more hours of sunlight during the spring than do southern areas, they soon catch up. Similarly, with increased elevation there is a decrease in temperature and flowering is later the higher we go. Those of us who vacation, or hike, in the mountains find that "spring" comes to many mountain valleys in early- to mid-July. As we move north or up, we find that the plants must compress their growing cycle into an ever shorter spring and summer. Locally, weather conditions may advance or delay



Smilacina stellata (Star-flowered Solomon's-seal)

Eriogonum flavum (Yellow Umbrella-plant)

flowering so that the area affected may become temporarily out of phase with the rest of the province.

When the Project started in 1973, data was gathered on 100 species. This number was gradually reduced to the 71 included in the present report. Careful examination of all the data now indicates that, for phenological purposes, the number can be further reduced to the 12 species listed in Table 3. These species are all native perennials that can be easily identified, have a wide distribution, and exhibit a reasonably consistent flowering period. With these thoughts in mind and with a desire to further simplify the reporting process and, at the same time, encourage more people to take part, it has been decided that the new enclosed reporting form should be utilized. Please set it aside and fill it in as the year progresses. Additional copies may be obtained from the Coordinator should you wish to make observations in additional areas. Our phenological observations reflected initial spring enthusiasm and then a tapering off with the coming of gardening, agriculture, holidays and other activities. Our new shorter forms may enable many of you to fit brief but vital observations into your busy schedules. Copies of the longer form are still available for those who would like to continue to record data for all 71 species. Remember that filling out these forms is one of the best ways to get to know your plants, and that we need your help.

	Waterton Lakes National Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Lethbridge Area
Anemone patens var. wolfgangiaca Prairie Crocus	My20		Ap5-Jn11	Ap23-Jn24	Ap2-Jn6
Populus tremuloides Aspen Poplar			Ap5-M620		
Fritillaria pudica Yellow Bells			My2-20	My6-14	Ap26-My6
Viola adunca Early Blue Violet	My20-Jn18		My7-Jn18	My27-Jn24	My14-22
Shepherdia canadensis Canada Buffalo-berry					My6
Ranunculus rhomboideus Prairie Buttercup			Jn10		
Thermopsis rhombifolia Golden Bean		Jn3	My2-Jn18		My6-28
Potentilla concinna Early Cinquefoil	My20		My7-20	My6	My6-28
Phlox hoodii Moss Flox	My20	My21-Jn3	Ap30-My27	Ap29-My27	Ap13-My28
Geum triflorum Three-flowered Avens		Jn27	Ap30-Jy10	Ap29-Jy2	Ap16-Jn17
Viola nuttallii Yellow Prairie Violet		My21	My19-27	My14	My6-28
Populus balsamifera Balsam Poplar			My7-20		My20-22
Androsace septentrionalis Fairy Candelabra	My20		My20	My6	My13-22
Arctostaphylos uva-ursi Common Bearberry	My20-Jn18		Ap20-Jn11	My6-Jn24	
Fragaria virginiana var. glauca Wild Strawberry	My20-Jn18		My19-Jn18 Au18	Jn24	My22
Amelanchier alnifolia Saskatoon	My20-Jn18	My21-Jn3	My20-Jn18	My27-Jn24	My6-28
Viola rugulosa Western Canada Violet	Jn18-29		My19-Jn18	Jn17-Jy2	
Disporum trachycarpum Fairy Bells	My20-Jn18		My20-27		My13-22
Smilacina stellata Star-flowered Solomon's-seal	Jn10-18	My21-Jn3		Jn17	My13-28
Prunus pensylvanica Pin Cherry	Jn18			My27-Jn24	
Corydalis aurea Golden Corydalis	Jn10				
Caltha palustris Marsh Marigold					
Calypso bulbosa Calypso Orchid	My20-Jn18			My27	
Clematis verticellaris var. columbiana Purple Clematis	My20-Jn18		My20-Jn10	My27-Jn24	

Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve	Calgary Area	Canmore Area	Drumheller Area
	Ap6-Jn2	Mr28-My21	Ap29-Jn27	Ap4-My28 Se10-Oc16	Ap5-My21	Ap9-My31
	Ap9-30			Ap7-My19	Ap3-My16	Ap25-My18
	My8-23					
	My4-Jn25	My15-21	My14-Jn30	My3-Jy29	Ap24-Jn27	Ap29-Jn8
		My21	My14-Jn4	Ap19-My28	Ap26-My27	
	My16	My2-22		Ap25-My28	My16-Jn12	Ap27-My18
My14	My4-Jy2 Au18	My14-21		Ap30-Jy24	My7-Jn24	My2-Jn24
	Ap23-Jn2	Ap2-My21	Jn13	Ap23-Jn21	Ap25-My21	Ap28-My14
My14	Ap23-Jy2	Ap28		Ap18-Jn21	Jn17	Ap28-My28
	My14-Jy2	My14-Jy3	My20-Jn27	Ap30-Jy17	My6-Jy16	My3-Jn23
My14	My8-Jn1	My29	Jn10	My6-Jn17		Ap29-Jn7
	Ap30			Ap28-My2	My1-16	
	My16-Jy2	My21-Jy3	My20-Jy8	Ap28-Jy5	My16-Jn24	My2-Jn30
	My23	My21	Ap29-Jn27	Ap30-Jy3	My6-Jn20	My24-28
	My8-Jy2	My21-Jy3	My14-Jy25	My15-Jy1	My6-Jy2 Au18-Se25	My21-Jn3
	Jn2	My27	Jn2-27	My12-Jn20	My22-Jn25	My15-28
	Jn2-25	My21-Jy3	Jn10-23	My8-28 Au2	My27-Jn12	My7-Jn24
	My23-Jn2	My21	Jn3-23	My18-Jn8	My27-Jn25	My18
	Jn2-Jy2	My27-Jy3	Jn6-27	My20-Jy21	My22-Jn25	My24-Jn19
						My21-Jn3
		My21	Jn17	My20-Jn28	My20-Jy2	My23-28
	Jn25		My20-Jn25	My21-24	My20-27	
	My23-Jn25	My21	My27-Jn27	My19-Jy14	My21-Jy12	My18-21

	Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright Area	Stettler Area
Anemone patens var. wolfgangiaca Prairie Crocus	My20	Ap30-My27	Ap29-My23	Ap18-My20 Se18	Mr28-Jn4
Populus tremuloides Aspen Poplar		Ap30-Jn3	Ap28-29	Ap24-My18	Ap23-27
Fritillaria pudica Yellow Bells					
Viola adunca Early Blue Violet	My20-Jy22	Ap30-Jn3	My6-Jn24 Se24	My3-Jn14 Oc6	Ap3-Jn4
Shepherdia canadensis Canada Buffalo-berry	My6-Jn18	My8-22	My6-27	My10	
Ranunculus rhomboideus Prairie Buttercup		Ap30-Jn3	Ap22-Jn24		Ap17-Jn4
Thermopsis rhombifolia Golden Bean		My13-Jn3	Ap22-Jn18	My8-Jn26	Ap29-Jn4
Potentilla concinna Early Cinquefoil		My27	Ap29-My23		Ap30
Phlox hoodii Moss Flox		My27		My9-31	
Geum triflorum Three-flowered Avens	My20	My13	Ap29-Jy16	My2-Jn29 Oc19	My13-Jn17
Viola nuttallii Yellow Prairie Violet			My4		My7
Populus balsamifera Balsam Poplar		Ap30	Ap2	My1-19	
Androsace septentionalis Fairy Candelabra	My6-Jn29 Se5-11	My13	Ap29-Jy1 Au9	My2-Jn15	My14-Jn17
Arctostaphylos uva-ursi Common Bearberry	My20-Jy4	My27	My15-Jn24	My21-Jy18	
Fragaria virginiana var. glauca Wild Strawberry	My20-Jy29 Au7-Se13	My14-Jn25	My14-Jy29 Au5-Oc15	My10-Jy10	My10-Jn30
Amelanchier alnifolia Saskatoon	Jy9	My20-Jn3	My21-Jn18	My16-Jn5	My17-28
Viola rugulosa Western Canada Violet	Jn3-Jy4	My14-Jy10	My19-Jn8 Se27-Oc15	My17-Jy1	Jn4
Disporum trachycarpum Fairy Bells		My14-Jn3	My27-Jn18		My28
Smilacina stellata Star-flowered Solomon's-seal		My27-Jn3	My23-Jy1	My27-Jn27	Jn4
Prunus Pensylvanica Pin Cherry		My27	My21-Jn10	My19-21	My21-28
Corydalis aurea Golden Corydalis	My20-22	My14-27	My9-Jn25 Se3	My9-Jy12	Jn4
Caltha palustris Marsh Marigold		My6-22	Ap29-Se29	My16	
Calypso bulbosa Calypso Orchid	My20-Jy4		My22-Jn24		
Clematis verticellaris var. columbiana Purple Clematis	Jy4-15	My27	My17-Jn25		

Camrose Area	Jasper National Park Area	Edmonton Area	Whitecourt Area	Athabasca Area	Cold Lake Area	Peace River Area	Fort McMurray Area
		Ap18			My18	Ap3-My23	My24-26
		Ap18-My7				My3	My28
My31-Jn2		Ap30-Jn6			My17-Jn9	Ap25-My28	My8-28
	My23	My1-20			My18	My1-Jn24	My8-24
						Ap27-My22	
My31-Jn27		My17-Jn15					
		Jn22				My30	
My31-Jy15		Jn7-15				My9-Jn27	
						.	
		Ap22-My18				My7	My28
	Jn28	Ap29-Jn15 Se3				Ap25-My23	My24-Jn28
		My5-20			My18-Jn9	My17-23	My15-Jn28
My20-Jy9	Jy8	My6-Jn27 Au29-Oc7	My20-Jn19	Au22-31	My17-Jn16	My17-Jn29	My8-Jn28
My20-Jn3		My13-Jn5			My17-Jn9	My9-Jn24	My22-Jn3
Jn13		My7-Jn24		Jy10-11	My31-Jn16	My11-12	My8-28
My20		My13-Jn5			My31-Jn10		My28
My22-Jn13		My26-Jn11			Jn7-9	My26-Jn24	My28
Jn3-10		My13-Jn5			My17-Jn9	My22-28	My22-Jn3
Jn13		My6-Jn7			My30-Jn16	My17-19	My15-Jn28
		My10-Jn6	Jn19		My17-Jn16		My15-28
		My20					My16-Jn3
		My13-Jn5	My30			My10	

	Waterton Lakes Provincial Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Lethbridge Area
Prunus virginiana var. melanocarpa Choke Cherry	Jn18	Jn3	Jn10	Jn17	My27-28
Cerastium arvense Field Chickweed	My20-Jn18	Jn3	My20-Au18	My6-Jn24	My14-Jn13
Penstemon nitidus Smooth Blue Beard-tongue	My20	My21-Jn3	My20-Jn18	My14-27	My6-Jn13
Balsamorhiza sagittata Balsam Root	My20-Jn10		My20-Jy2	My14	
Maianthemum canadense var. interius Wild Lily-of-the-Valley					
Comandra pallida Pale Comandra		Jn3	Jn10		My6-Jn13
Lithospermum ruderale Woolly Gromwell	Jn29		My20-Jy2	My27-Jn17	My14-28
Zizia aptera Heart-leaved Alexander			My19-Jy2		
Mertensia paniculata Tall Lungwort					
Elaeagnus commutat Wolf Willow		Jn3	Jn18-24		My27-Jn9
Arnica cordifolia Heart-leaved Arnica	Jn18-Au21		Jn10-Au18		
Lathyrus ochroleucus Yellow Pea Vine			Jn11-Jy2		
Thalictrum venulosum Veiny Meadow Rue	My20-Jn29		My28-Jn18	Jn24	My22
Senecio canus Silvery Groundsel	Jn18	Jn3	Jn24		My27-Jy3
Lonicera dioica var. glaucescens Twining Honeysuckle				Jn24	
Sisyrinchium montanum Blue-eyed Grass		Jn27	Jn18-Jy2		My27-Jn17
Anemone canadensis Canada Anemone		Jn27	Jn10		Jn4-Jy3
Linum lewisii Wild Blue Flax	Jn27	Jn27-Jy22	Jn24	Jn24-Jy23	Jn9-Jy3
Dryas drummondii Yellow Dryas					
Lonicera involucrata Bracted Honeysuckle	My20-Jn29		Jn18	Jn17-Jy2	
Ledum groenlandicum Labrador Tea					
Geranium viscosissimum Sticky Purple Geranium	Jn10-29	Jn27	Jn10-Au18	Jn17-Jy2	
Rubus strigosus Wild Red Raspberry	Jn29		Jn10-Jy24		
Cornus canadensis Bunchberry					

Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve	Calgary Area	Canmore Area	Drumheller Area
		Jn5		My25-Jy3	Jn4-25	My28-Jn5
	Jn2-Jy2	My21-Jy3	Jn3-27	My13-Jy24 Oc15	My22-Jy24 Se25	Ap15-Jn8
	My23-Jy2	Jn1-Jy3	Jn13-27	My18-Jn21	Jn25	My7-28
	My23-Jn25					
	My23-Jy2		Jn3-27	My27-Jy10	Jn2-Jy15	My14-28
	Jn25-Jy2	My27-Jy3	Jn27	My20-Jy14	My22-Jn25	
	Jn28-Jy21	Jy3	Jn1-Jy29	My19-Au2	My22-Jy12	My18-Jy16
	Jn28	Jy3	Jn10-23	My25-Jn22	Jn5-21	
	Jn28	Jn19-Jy3	Jn17-27	My31-Jy3	Jn8-24	Jn3-24
	Jn11-Jy2	Jy3	Jn6-Jy25	Jn4-24	Jn4-16	
	Jy2	Jn25-Jy3	Jn3-23	My25-Jy16	Jn2-Jy16	
	Jn25		Jn3-10	My25-Jn24	My27-Jn25	My29-Jn24
	Jy2	Jy3	Jn13-Jy18	My25-Jy16	Jn1-Se19	My21-Jy5
	Jn28	Jy3	Jn23-Jy16	Jn8-Jy16	Jn8-Jy10	Jn7-20
	Jn28-Au4	Jn25	Jn17-27	My28-Au14	Jn4-Jy13	Jn8-Jy16
	My4-Jn28	Jy3	Au4	My25-Au12	Jn10-24	Jn7-Jy16
	Jn25-Jy2	Jn25-Jy3	Jn10-Jy14	Jn4-Au11	Jn10-Jy15	Jn8-21
		Jy3	My20-Jy18		My21-Jn25	
			Jn10-23	Jn16-24	Jn1-10	
			Jn17-23			
	Jn25-Au4	Jn19	Jn27-Jy18	My28-Au14	Jn11	
			Jn23-Jy18	My31-Au11	Jy2	
		Jy3	Jn11-Jy30	My31-Jn11	Jy16-22	

	Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright Area	Stettler Area
Prunus virginiana var. melanocarpa Choke Cherry		My27-Jn4	My29-Jy1	My26-Jn15	My28-Jn4
Cerastium arvense Field Chickweed	My20-Jy29 Se12	My20-Jn25	My20-Jy14 Au6-Oc15	My9-Jn29	My17-Jy17
Penstemum nitidus Smooth Blue Beard-tongue		My27			
Balsamorhiza sagittata Balsam Root					
Maianthemum canadense var. interius Wild Lily-of-the-Valley		Jn12	Jn9-Au5	Jn11-Jy11	Jn4-18
Comandra pallida Pale Comandra		My27	Jn9-10	My29-Jn15 Au4	My25-Jn17
Lithospermum ruderale Woolly Gromwell			My23		
Zizia aptera Heart-leaved Alexander	Se19	My27-Jn25	My23-Jy14	Jn5-Jy1	Jn4
Mertensia paniculata Tall Lungwort	Jn29	My31-Jn25	My20-Au6		
Elaeagnus commutat Wolf Willow			Jn18-Jy1	My31-Jn28	Jn4
Arnica cordifolia Heart-leaved Arnica	Jn6-Se19	Jn9	My29-Jy29		
Lathyrus ochroleucus Yellow Pea Vine	Jy4-29	My27-Jn25	My29-Jy29	My31-Jn28	My25-Jn30
Thalictrum venulosum Veiny Meadow Rue	Jn18-Jy4	My27-Jn25	My23-Jy1	Jn1-26	My10-Jn4
Senecio canus Silvery Grounsel			My23-Jy14	My31-Jn29	
Lonicera dioica var. glaucescens Twining Honeysuckle	Jn18-Jy4	Jn11-25	Jn8-Jy14	Jn14-28	Jn17-18
Sisyrinchium montanum Blue-eyed Grass	Jy9	My27-Jn25	Jn12-Oc9	My27-Jy13	My28-Jy3
Anemone canadensis Canada Anemone		Jn25-Jy10	Jn9-Jy31	My31-Jy21	Ap29-Jy29
Linum lewisii Wild Blue Flax	Jy9		Jn17-Jy14	My31-Jn29	Jn4
Dryas drummondii Yellow Dryas	Jn11		Jn18-Jy1		
Lonicera involucrata Bracted Honeysuckle	Jn29-Jy16	Jn4-13	My23-Jy17		
Ledum groenlandicum Labrador Tea	Jn29-Jy29		Jn6-26		
Geranium viscosissimum Sticky Purple Geranium	Se5-13		Jy13-Au9		
Rubus strigosus Wild Red Raspberry	Jy15	Jn12	Jn8-Jy16	Jn14-Jy13	Jn17-18
Cornus canadensis Bunchberry	Jy4-Au7	Jn4-Jy10	Jn4-Au6	Jn11-Jy1	

Camrose Area	Jasper National Park Area	Edmonton Area	Whitecourt Area	Athabasca Area	Cold Lake Area	Peace River Area	Fort McMurray Area
		My24-Jn10			My31-Jn16	My28-31	My28
My31-Jn13		My18-Jy10				My17-Jn27	My28-Jn28
		Jn17					
Jn3-10		My28-Jy7	Jn19	Jy10-12	Jn7-16	My28	Jn28
Jn2-27		My27-Jn24			Jn6-16	Jn21-20	Jn3-28
My31-Jn27		My17-Jn22	Jn19			Jn24	
My20-Jn30	Jy8	My19-Jy7	Jn3-19	Jy10-11	My20-Jn16	My27-30	My28
Jn2-13		My27-Jn19	Jn19		Jn10-16	Jn11-22	
	Jy8		Jn11		Jn15-16	Jn19	
My22-Jy9		My17-Jy10	Jn19	Jy10-12	My30-Jn16	Jn4-25	
Jn13	Jy8	My17-Jn22			Jn6-16	My27	My28
		Jn4-22	Jn19		Jn7-16	Jn19	My28
My31-Jn27	Jy8	My27-Jn22	Jn20		Jn5	My28-Jn27	My28
Jn12-Jy15		Jn2-Jy25	Jn19		Jn11-16		My28
	Jy8					Jn24-29	
	Jy8						
Jn10	Jy8	My19-Jn22			Jn1-16	My27	My22-Jn28
	Jy8	My27-Jy9	Jn19		My31-Jn16	Jn11-19	
		Jn12-Jy10					Jn28
Jn10-Jy9	Jn18-Jy8	My20-Jy13	Jn19	Jy10-12	Jn7-16	My28	My22-Jy31
Jn3-23	Jy8	My28-Jy13	Jn4-19	Jy10-12	Jn6-16	Jn10	Jn3-Au8

	Waterton Lakes Provincial Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Lethbridge Area
Galium boreale Northern Bedstraw	Jn29-Au21	Jn27	Jn18-Au18	Jy2	
Achillea millefolium ssp. lanulosa Common Yarrow	Jn29-Au21	Jn3-27	Jn24-Au18	Jy2	Jn9-Jy3
Castilleja miniata Common Red Paintbrush	My20-Au21		Jn24-Au18	My14	
Zygadenus elegans White Camas	Jn29	Jn27	Jn24		
Oxytropis splendens Showy Locoweed	Jn29		Jn18-Au18		
Pyrola asarifolia Common Pink Wintergreen	Jn18-Au21		Jn24-Jy2		
Lilium philadelphicum var. andinum Western Wood Lily			Jn24		
Hedysarum alpinum Alpine Hedysarum			Jn24-Jy24		
Eriogonum flavum Yellow Umbrella-plant		Jn16			My14-Jy3
Heracleum lanatum Cow Parsnip	Jn18-Au21		Jn10-Au7		
Pedicularis groenlandica Elephant Head			Jn18-Jy2		
Linnaea borealis var. americana Twin-flower	Jn10-29			My27-Jy2	
Castilleja septentrionalis Common Yellow Paintbrush	Jn29		Jn10-Au18		
Symphoricarpos occidentalis Western Snowberry			Jy15-Au18		Jy3
Gaillardia aristata Brown-eyed Susan	Jn29	Jn16-27	Jn24-Au18	Jy2	Jn9-Jy3
Campanula rotundifolia Bluebell	Au21		Jn24-Oc13	Jy2-23	Jy3
Epilobium angustifolium Common Fireweed	Jn29-Au21				
Agoseris glauca False Dandelion	Jn29	Jn16	Jn24-Au18	Jy2	Jn26-Jy3
Mentha arvensis var. villosa Wild Mint					
Chrysopsis villosa Golden Aster		Jy22	Au7-18	Jy2	Jy3-Se23
Grindelia squarrosa Gumweed					Jy9-Se23
Parnassia palustris Grass-of-Parnassus					
Monarda fistulosa var. menthaefolia Wild Bergamot			Jy14-Au18		Jy3

Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve	Calgary Area	Canmore Area	Drumheller Area
	Jn25-Au18	Jy3	Jn23-Jy18	Jn6-Oc4	Jn10-Au8	Jn16-Au2
	Jn25-Oc14	Jy3	Jn22-Se17	My31-Oc15	Jn10-Oc25	Jn17-Au2
	Jy2	Jy3	My21-Au27	Jn11-Au11	My21-Se25	
	Jn25-Jy21	Jn25	Jn23-Au4	Jn2-Au14	Jn16-Jy15	Jn7-Jy16
	Jn2-Au4	Jy3	Jn27-Au4	Jn23-Jy29	My27-Jy16	Jn16-30
		Jy3	Jn16-Jy27	Jn21-Jy15	Jn17-Jy16	Jn30
	Jn25-Jy21	Jn25-Jy3	Jn15-Jy30	Jn11-Jy13	Jn5-Jy15	Jn23-30
	Jy2	Jy3	Jn23-Au13	My25-Au3	My21-Au19	Jn19-Jy29
				Jn16-Au9	Jy14-15	Jn23
	Jn25-Jy21	Jy3	Jn10-Se17	Jn23-Jy28	Jn23-Au8	Jn23
		Jy3	Au4	Jn11-Au2	Jn11-22	
	Jy21	Jy3	Jn23-Jy27	Jn11-29	Jn25-Jy16	
	Au4		Au4	Jn16-Jy17	Jn22-Jy16	Jy1
		Jy3	Jy16	Jn28-Au14		Jn26-Au2
	Jn25-Jy21	Jn25-Jy3	Jy18-Au27	Jn17-Oc5	Jn17-Se26	Jn21-Jy3
	Jn25-Au18		Jy5-Au27	Jn20-Oc15	Jn22-Se26	Jn20-Au2
	Au4	Jy3-27	Jy8-Au4	Jy3-Se3	Jn16-Au8	Jn5-Au2
	Jy2-Au18	Jy3	Jn23-Jy18	Jn16-Au14	Jn17-Oc17	Jn17-Jy16
		Jy19		Jn29-Jy20	Au8-25	Jy16-Au2
				Jn27-Oc18	Jy23-Se25	Jn20-Jy6
	Jy27-Au18			Jy24-Se28		Au3
			Jn23-Au4		Jn17-Au18	Jy16-Se1
	Jy21-Au18			Jy3-Au19	Jy15-Au19	

	Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright Area	Stettler Area
Galium boreale Northern Bedstraw	Jy9-29	Jn25-Jy15	Jn11-Se3	Jn11-Jy21	Jn16-Jy17
Achillea millefolium ssp. lanulosa Common Yarrow	Jn29-Se27	Jn25-Jy10	Jn18-Oc20	Jn11-Se27	Jn16-Au13
Castilleja miniata Common Red Paintbrush	Jn3-Se25	Jy10-Se10	Jn10-Se24	Jy20	Jn17-Au13
Zygadenus elegans White Camas	Jy9-Au7		Jy9-Au14	Jy20	
Oxytropis splendens Showy Locoweed	Jn29		Jn25-Jy1	My17	
Pyrola asarifolia Common Pink Wintergreen	Jy9-Se10	Jn12-Jy15	Jn23-Au6	Jn21-Jy7	Jn4-18
Lilium philadelphicum var. andinum Western Wood Lily		Jy10	Jn11-Jy25	Jn18-Jy6	Jn22-Jy23
Hedysarum alpinum Alpine Hedysarum	Jn29-Se11		Jn10-Se24	Jn11-Jy20	Jn17-Jy13
Eriogonum flavum Yellow Umbrella-plant					
Heracleum lanatum Cow Parsnip	Jy9-22		Jn19-Se10	Jn26	Jn12
Pedicularis groenlandica Elephant Head	Jn29-Au7	Jn12-Au11	Jn18-Jy29		
Linnaea borealis var. americana Twin-flower	Jy4-Se10	Jn12-Jy25	Jn17-Jy29		
Castilleja septentrionalis Common Yellow Paintbrush	Jy6-Au7	Jy10	Jn18-Jy30		
Symphoricarpos occidentalis Western Snowberry		Jn25-Jy10	Au6	Jn27-Au5	
Gaillardia aristata Brown-eyed Susan	Jy9	Au13	Jy1-Oc9	Jn28-Jy27	Jn26-Au13
Campanula rotundifolia Bluebell	Jy29-Se27	Jy10-15	My31-Oc15	Jn25-Se8	Jy2-Au13
Epilobium angustifolium Common Fireweed	Jy5-Se6	Jy9	Jn28-Se20	Jn11-Au31	Au13
Agoseris glauca False Dandelion	Jn29-Se13		Jn18-Se24	Jn17-Jy17	Jn16-Jy17
Mentha arvensis var. villosa Wild Mint		Jn25		Jy13-Au4	Jy14-Au13
Chrysopsis villosa Golden Aster		Jy10	Jn18-Se8	Jn18-Se8	Jn17-Au13
Grindelia squarrosa Gumweed					Jy8-Au13
Parnassia palustris Grass-of-Parnassus	Jy9	Jy10-15	Jy13-Au8	Jy20	
Monarda fistulosa var. menthaefolia Wild Bergamot		Jy10-15	Jn10-Au9	Jn29-Jy19	Jy14-29

Camrose Area	Jasper National Park Area	Edmonton Area	Whitecourt Area	Athabasca Area	Cold Lake Area	Peace River Area	Fort McMurray Area
Jn13-Jy9	Jy8	Jn7-Jy25	Jn19	Jy10-12	Jn11-Jy24	Jn10-25	Jn28-Au8
Jn13-Ly16	Jy8	Jn15-Oc12	Jn19-26	Jy10-Au31	Jn11-Au11	Jn5-29	Jn3-Au11
	Jy8	Jn16-Jy21	Jn17-19	Jy10-12	Jn11-Jy24	Jn11-Se25	Jy24
	Jy8	Jn10					
	Jy8					Jn24	
Jn10-Jy9	Jy8	Jn16-Jy12		Jy10-12		Jn28	Jn28-Jy28
	Jy8	Jn10-Jy15	Jn19-Jy1			Jn19-29	
Jn13-27		Jn19-Jy28					
Jn23-Jy15	Jy8	Jn10-Jy25	Jn19-24	Jy10-12	Jn15-Jy24	Jn11	Jy24
	Jy8						
Jn30-Jy9	Jy8	My28-Jy13		Jy10-Au29	Jn12-16	My28	Jn28-Au1
Jn27		Jn7-Au18		Jy10-11		My14-Jn21	
Jn27	Jy8	Jn7-Jy21				Jy15	
Jn27	Jy7-26	Jn30-Oc21				Jn29-Jy14	Jn28-Au10
Jn27-Jy15	Jy8	Jn15-Au29	Jy3	Jy10-Au31	Jy24-Au11	Jn19-Jy16	Jy24-Au11
	Jy8	Jn24				My19-Jn25	
		Jy9-Au26				Jy1	
		Jy23-Au20					
		Oc12					
	Jy8	Jy8-Au31					Jy24-Au10
		Jy25				Jn21-Jy16	

ALBERTA CHRISTMAS BIRD COUNTS, 1978

Compiled by
Virginia Lang
R.R. #1, Busby, Alberta TOG OHO

Approximately 65,000 individual birds, representing 87 species, were recorded by 330 observers on the 13, 1978 Alberta Christmas Bird Counts.

The Turner/Halliday Trophy for the highest number of species went to Calgary this year, with an impressive - and record-breaking - 55 species. The Calgary count list is characterized by a respectable number of uncommon species but relatively few spectacular rarities or "firsts" for Calgary counts - and characterized equally by relatively few omissions of possible or likely-to-occur species.

Lethbridge accounted for the highest number of observers - 55 - more than double the number of participants on their count last year.

The most unusual sighting on this year's counts has to be the Rufous-sided Towhee found on the Edmonton count.

The species accounting for the highest number of individuals is, not unexpectedly, Bohemian Waxwings. 29,910 individuals (9,904 in Calgary, 17,941 in Edmonton), up from a low 14,040 individuals last year, comprised 46% of the total number of individual birds counted.

Record numbers of Mallards were counted this year. (See Table 1.) The Edmonton Mallard count was comparable to previous years, but Calgary's total more than doubled, from 4,623 in 1977 to 10,089 this year. Mallards comprised 18% of the total number of individual birds counted.

In all, although the total species count did not equal last year's count (87 compared with 91), number of observers and number of individual birds counted surpassed previous counts, making 1978 Alberta Christmas Bird Counts one of the most successful yet.

Details of each count, as forwarded to me, are listed below. If additional details are required, check with the individual count compilers.

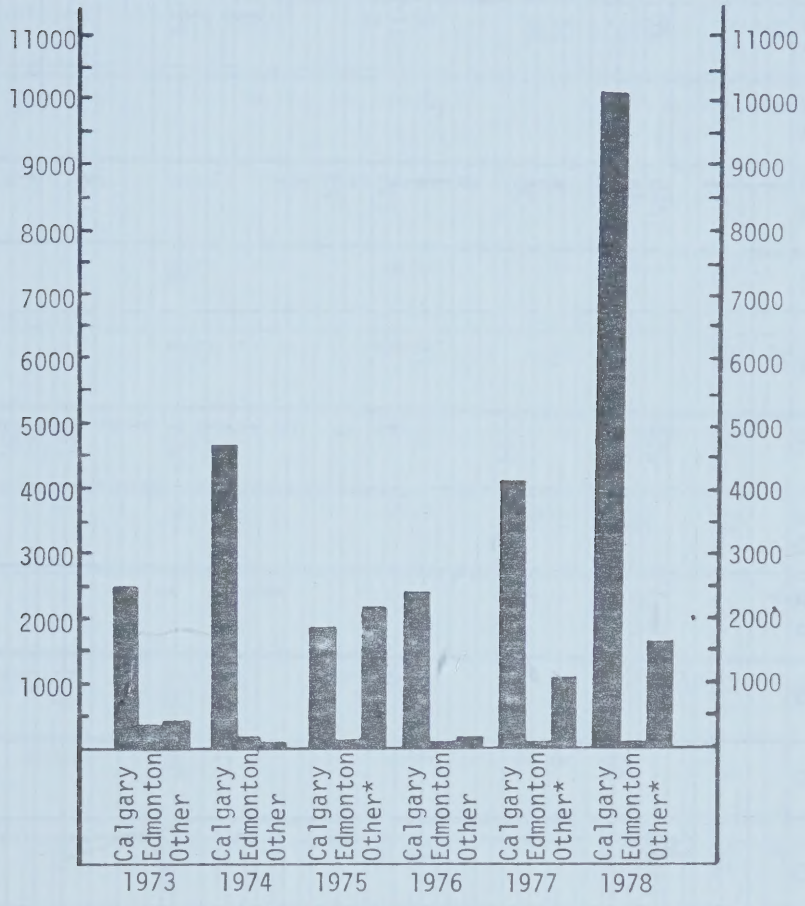
Banff/Canmore: 51°10'N, 115°28'W. Centre on Bow R. 4.5 mi. east of Banff in Banff National Park; elevation 4400 to 9836 ft; habitat coverage: woodland 75%, marsh, 10%, residential, 10% old fields, 3%, river, 2%.

December 17; 8am to 6pm. Partly cloudy; temp. -6° to -15°C; wind west 5 kph. Fresh water partly open. Wild food crop fair. Thirty-two observers, 28 in 14 parties and 4 at feeders. Total party hours 101 (88 on foot and skis, 13 by car); total party-kilometers 403 (156 on foot and skis, 247 by car).

Total 38 species (1 additional race); about 2585 individuals. In count area during count week: American Robin, White-crowned Sparrow.

Observers: Allan Brooks, Dan Brunton, Ed and Dorothy Carleton, Ron Chamney, Howard and Jayne Coneybeare, Sheila Douglas, Halle and Linda Flygare, Bruce and Ruth Gordon, Aileen Harmon, Helen Herrle, Rob Harding, Elizabeth and Geoffrey Holroyd (Com-

TABLE 1. TOTAL NUMBERS OF MALLARDS, ALBERTA CHRISTMAS BIRD COUNTS, 1973-1978



Includes Wabamum Lake Counts

piler, Box 1343, Banff, Alberta TOL 0C0), Margot Lower, Keith and Margie McDougall, Diane and Mike McIvor, Harold and Julie Mortimer, Brian and Louise Patton, Blane Robinson, Morna Schechtal, Steve Schwartz, Ron Seale, Margaret Skeel, Gerry Wilkie, Brid Baxter.

Bow Summit, Alberta: 51°39'N, 116°25'W. Centre south end of Bow Lake in Banff National Park, elevation 5,700 to 10,741 feet; habitat coverage: coniferous woodland 55%, lakes and streams 23%, alpine meadow 15%, glacier 7%.

December 30; 8:30am to 4:30pm, clear, temp. -35° to -25°C; wind north 0-5 mph, snow cover 24 to 36 inches. Water frozen, wild food crop poor. 7 observers in 3 parties. Total party hours 17 (13-1/2 on foot and skis, 3-1/2 by car); total party kilometers 90 (37 on foot and skis, 53 by car).

Total 9 species, about 32 individuals. Participants: Geoffrey Holroyd, Lloyd Lohr, Diane and Mike McIvor (Compiler, Box 114, Banff, Alberta TOL 0C0), Ron Seale, Danny Verral, Gerry Wilkie.

TABLE 2. ALBERTA CHRISTMAS BIRD COUNTS 1978

Species	Banff/ Canmore	Bow Summit	Calgary	Drumheller	Edmonton	Fort McMurray	Grande Prairie	Lethbridge	Red Deer	Stettler	Wabamun Lake	Waterton L. Nat. Park	Wildlife Reserve	TOTAL IND.
Common Loon											1			1
Grebe spp.											1			1
Western Grebe											1			1
Canada Goose			22											22
Mallard	193		10078		117	1		254			1245		70	11958
Gadwall			4								14			18
Pintail											2			2
Green-winged Teal	5		1											6
Blue-winged Teal											2			2
American Wigeon			1								31			32
Redhead			1											1
Ring-necked Duck											6			6
Canvasback											1			1
Scaup spp.											1			1
Common Goldeneye	87		560		21			7			255			930
Barrow's Goldeneye			5								2			7
Bufflehead	1		1								23			25
Hooded Merganser											2			2
Common Merganser	9		17			1					1			28
Goshawk	2		3					1	1			1	1	9
Sharp-shinned Hawk								1						1
Cooper's Hawk													1	1
Red-tailed Hawk						1								1
Rough-legged Hawk			3					7						10
Golden Eagle			1					5						6
Bald Eagle	1		1								2			4
Marsh Hawk								1						1
Gyrfalcon											1			1
Prairie Falcon			1					5						6
Merlin			4		20				1					25
American Kestrel								3						3
Spruce Grouse	1	1												2
Ruffed Grouse			3		22		3	2	18	3	7	17	9	84
Willow Ptarmigan						8								8
Wht.-tailed Ptarmigan		3												3

TABLE 2 - CONTINUED

	Banff/ Canmore	Bow Summit	Calgary	Drumheller	Edmonton	Fort McMurray	Grande Prairie	Lethbridge	Red Deer	Stettler	Wabamun Lake	Waterton L. Nat. Park	Wildlife Reserve	TOTAL IND.
Sharp-tailed Grouse			5		13			166			*	28	5	217
Ring-necked Pheasant			10	4	43			273						330
Gray Partridge			109	4	400		1	437		7			14	972
American Coot											3			3
Killdeer			4											4
Common Snipe	3													3
Rock Dove			1716	20	629		8	724	112	28	9		16	3262
Great Horned Owl	1		5		5			14	2	1	2			30
Snowy Owl			7		3		1	12					2	25
Hawk Owl						3							2	5
Short-eared Owl								8	1					9
Belted Kingfisher	5		4											9
Common Flicker			5		6			8						19
Pileated Woodpecker						1			3				2	6
Hairy Woodpecker	6		5	2	12	1	5	3	7	4	2	5	11	63
Downy Woodpecker	9		20	3	40		3	10	17	8	3	2	8	123
Nor. 3-toed Woodpecker	2	1	1											4
Blk.-bk. 3-toed Woodpecker					1									1
Horned Lark								541						541
Gray Jay	64	2				7	10				2		31	116
Blue Jay				2	113	7	11	8	18	7	7		21	194
Steller's Jay												7		7
Blk.-billed Magpie	138		829	30	685	3	33	556	58	162	27	17	187	2725
Common Raven	214	4	83			667	30	12		1		2	20	1033
Common Crow	8		13					2				1		24
Clark's Nutcracker	277	3										1		281
Black-capped Chickadee	260		393	20	613	22	51	87	90	53	79	17	174	1859
Mountain Chickadee	264		4									4		273
Boreal Chickadee	125	9	38		9	4			12		3	1	79	280
White-breasted Nuthatch	4		8		10		2	2	3				4	33
Red-breasted Nuthatch	7		10		1			18	6				1	43
Brown Creeper	13		7		3								3	26
American Dipper	35	4	1									3		43
American Robin			2		1			3						6
Varied Thrush			1						1					2

TABLE 2- CONTINUED

	Banff/ Canmore	Bow Summit	Calgary	Drumheller	Edmonton	Fort McMurray	Grande Prairie	Lethbridge	Red Deer	Stettler	Wabamun Lake	Waterton L. Nat. Park	Wildlife Reserve	TOTAL IND.
Townsend's Solitaire	3		1											4
Golden-crowned Kinglet		1	14		14			10					2	41
Bohemian Waxwing	46		9904	100	17941	41	11	626	1226	15				29910
Cedar Waxwing			1		2			5						8
Northern Shrike			1								2		3	6
Common Starling	28		295	3	344	2		205	1	4			5	887
House Sparrow	358		843	25	687	70	41	1415	74	163	25		93	3794
Red-winged Blackbird	2													2
Evening Grosbeak	40		26	40	282	30	56	3	140		1			618
Pine Grosbeak	39		80	5	76	12	50		22	1	16	4	14	319
Hoary Redpoll			8		4	3								15
Common Redpoll	4		434	10	517	59	380	86	60	43	31		78	1702
Pine Siskin					2				1					3
Red Crossbill	10													10
White-winged Crossbill			10		9				57				6	82
Rufous-sided Towhee					1									1
Dark-eyed Junco	5		4		11			1	1					22
Tree Sparrow								8						8
Snow Bunting	270		3	11				176		230	1		900	1591
TOTAL NUMBER OF SPECIES	38	9	55	15	35	20	17	39	25	16	37	15	29	
TOTAL NUMBER INDIVIDUALS	2539	28	25610	279	22657	943	696	5705	1932	730	1810	111	1762	64802
TOTAL NUMBER OBSERVERS	32	7	52	10	53	8	11	55	13	29	7	14	39	330

TOTAL NUMBER OF SPECIES, ALL COUNTS: 87

Calgary: December 17. 8:00am to 5:00pm. Temp. 20°F to 14°F (-10° to -7°C), wind SW3, 2-8 inches snow, overcast all day.

52 observers, 603 miles (77 on foot, 526 by car), 120 hours (67 on foot, 53 by car), feeder time, 7 hours. 55 species, about 25,610 individuals.

Comments: All-time high species count (previously 49 in 1977). Raven numbers exceptionally high. All species were recorded at least once on previous counts.

Observers: list not provided. Compiler: Ian Halliday.

Drumheller: December 12. 9:00am to 5:00pm. 6 adults and 4 Junior Forest Wardens participating. Miles travelled: 30 by car, 3 by foot. Temp. -30° to -24°C, wind N10. Peak of bird activity, 1-3pm.

Compiler, Emile Gautreau, Director Badland Explorers-Junior Forest Warden Club, Box 2565, Drumheller, Alberta TOJ OYO.

Mammal observations: rabbit populations high (snowshoe hare and cottontail), jacks medium population. Mule deer, plentiful. We also have 2 moose overwintering along Rosebud Creek near Taylor Siding (10 miles SW of Drumheller).

Species present in area during count week: Great Horned Owl, Snowy Owl, Pileated Woodpecker, White-breasted Nuthatch, American Robin.

Edmonton: December 17. Temp. -12° to -10°C; wind North 25 kph; about 18 cm snow cover. River partly open, overcast day.

53 observers in 22 parties covering 14 designated areas of the count circle, 105 party miles on foot, 101 party hours on foot; 544.5 party miles by car, 41-3/4 party hours by car).

Seen in count period but not on count day: Pileated Woodpecker.

Submitted by Linda Pilarski. Observer list not provided.

Fort McMurray: December 17. Surveys conducted from the Anzac area some 30 km southeast of Fort McMurray north through the townsite to the AOSERP camp some 40 km north of town. The GCOS lease was included in the count. 300 km by three groups, most of the coverage from vehicles.

Mammals sighted: Red Fox, 1; Red Squirrel, 1.

Observers: John R. Gulley (Compiler), Sherry Fully, Deidre Spencer, Paul Spencer, Randy Chappel, Mark Dodds, Julian Powder and Heather Alexander.

Comment: Hawk Owls very common this year.

Grande Prairie: December 16. NW5-72-7 W6th, north and east sides of Saskatoon Mountain, including Saskatoon Lake and Park, west and south sides of Bear Lake and north end of Hermit Lake. 10:30am to 3:00pm. Weather sunny and calm with -12°C in the morning and cloudy with an east breeze in the afternoon. There was a 3 inch snow cover on the mountain area, and mostly bare elsewhere. A total of 42 miles by truck. Observers: Gavin and Ellen Craig (Compiler), Joseph LaValley.

December 16. Wembley and south to Wapiti River and parts of Sections 3, 6, 7, 8, 10, and 15, Tp. 71 R. 8 W6th. 1:30pm to 4:00pm. The weather was sunny with light northwest wind, -12°C, 1" snow cover. The area was park at the Wapiti River, open fields and bluffs of poplar and aspen and the Village of Wembley proper. 43.3 miles by car. Observers: Donald and Louelle Watson (Compiler).

December 16. Wembley, acerage, 2-1/2 acres on NW corner. 3:00pm to 5:00pm feeder count. Ivor Cutler, Helen Cutler (Compiler).

December 16. Halcourt and east and south toward the Redwillow River, 2:00pm to 4:00pm. 15 miles by truck. Weather, sunny with light northwest winds, -12°C. Open fields and poplar and willow bluffs and mixed coniferous and deciduous forest with a 5" snow cover. Observers: Robert and Lorna Dahl (Compiler).

December 17. NE20 70 7 W6th. 10:00am to 11:00am and 2:30pm to 3:30pm. Weather, stormy, NE winds 15-20 kph, temperature -17°C. Feeders and west to the Hinton Trail

area, a distance of 64 miles round trip. Observers: Yvonne and Walter MacAlister (Compilers).

Lethbridge: December 26. Residential areas, parks, river valley, coulees, dryland, prairie lake and marsh areas in Lethbridge and within a fifty-mile radius. Weather: Temperature -13° to -5°C, wind SW 11 kph to W 13 kph, sunny with some cloud, some snow cover. 55 observers, 867 miles by vehicle, 47.5 miles on foot. Reports included from Bow Island, Cardston, Claresholm, New Dayton, Pincher Creek, Vauxhall.

Species seen during count period but not on count day: 1 Saw-whet Owl; 1 Kingfisher; 7 Lapland Longspur; 2 Canada Goose; 2 Northern Shrike; 2 Merlin; 1 Gyrfalcon (white phase); 2 Ruby-crowned Kinglet; 1 Brown Creeper.

Mammals: 1 Mink; 2 Coyote; 2 Red Fox; 106 White-tailed Deer; 1 shrew; 6 White-tailed Prairie Hare; 2 Cottontail Rabbits; 7 Pronghorn Antelope; 2 Short-tailed Meadow Vole; 100 Mule Deer; 1 weasel.

Observers: list not provided. Compiler: Betty Haig.

Red Deer: December 17. Counts were made at three feeders, city ravines, residential areas, river valley within a 7-mile radius of Red Deer. Weather -12°C, overcast with light winds. 25 species, 1,932 individuals, 13 observers.

Observers: Bob Maisden, Maxine O'Riordan (Compiler), Michael O'Brien, Jennifer O'Brien, Fred Schutz, Dennis Anderson, Dorothy Broadbent, Glynes Broadbent, Majorie Wood, Kerry Wood, Herb Harris, Margaret Glabais, Erling Glabais.

Stettler: December 17. Area, circle of 15 miles diameter, town of Stettler as the centre. 29 observers, 24-1/2 party hours, 161 vehicle miles, 13-1/4 party miles on foot. -12° to -4°C, east breeze, overcast, bare ground to 15cm of snow.

Seen during count period but not on count day: 1 Northern Shrike.

Mammals: 1 Coyote; 3 White-tailed Deer; tracks of coyotes, porcupine, snowshoe hare, jackrabbit, mice, deer and weasel.

Observers: Dorothy Brownlee, Jim Burrel, Edie Clark, Clifford Clark, Marg Croucher, Earl and Elsie Cruikshank, Rosemary Dowie, Marj Ganske, Grace Grabill, Ernie and Trudy Grafe, Bernice and Lloyd Greenlee, Art and Edna Haywood, Gladys and Wilf Hewlett, Art Hayes, Art Johnson, Ron Kruger, Bea Lohr, Lloyd Lohr (Compiler), Marvin Lohr, Virginia Maitland, George and Grace Neill, Grace O'Shea, Eric Smith.

Wabamun Lake: 53°35'N 114°35'W, centre intersection Hwys 16 and 765, as described in 1977. Elevation 2378' to 2700'. Habitat coverage: residential 35%; forest 25%; frozen lake and rivers 15%; cultivated land 15%; open water 10%. 24 December, 0745 to 1630 hours. Weather: morning clear, afternoon partly cloudy, temperature -15° to -8°C, wind ESE, 0-15 mph. Snow cover 0-4", freshwater partly open. Seven observers, 7 in two parties. Total party hours, 22 (13.5 on foot, 8.5 by car) plus .75 owling. Total party miles, 123.25 (17.25 on foot, 106 by car). 37 species, about 1814 individuals. Seen during count period but not on count day: Northern Shoveler, Common Raven.

Observers: G.R.A. Ebel (Compiler, 8016 - 180 St., Edmonton, Alberta T5T 0T3), John Faragher, Charles Harper, Ernie Kuyt, Duane Sept, Susan Servos-Sept, Al Smith.

Waterton Lakes National Park: December 30. Waterton Lakes National Park. 10:30am to 3:00pm. Weather: temperature, -20° to -24°C, wind 0-2, light winds occurring on prairies, light cloud cover, partial sunshine, ice-frost. Snow depth varied from 0" blown free on some roads and open prairie to one metre plus in sheltered wooded areas. 14 observers. Comments: numbers of birds were low due to cold weather and frozen lake surfaces; participation down due to cold weather.

Species seen during count period but not on count day: 1 Golden Eagle; 1 Gray Jay; 1 Brown Creeper; 6 Snow Bunting.

Party miles: 93 - 14 on foot, 79 by car; party hours, 4 to 4-1/2 hours. 12 observers in field, 3 bird feeder watches.

Mammals: 34 Mule Deer; 5 Coyotes; 6 Pine Squirrel.

Observers: Gordon Ross, Duncan J. Mackintosh, Kate Beaty, Michael O'Shea (Lethbridge Naturalists' Society); Tony, Ann, Jessica and Roger Bull, Simon (Compiler) and Carolyn Lunn, Ken Goble, Dave Gilbride, Margaret Cristall, Colleen Casey.

Wildlife Reserve of Western Canada. 51°26'N 114°35'W, centre SW corner Sec. 26 Tp28N R5 W5th, as described in 1975; elevation 3725 to 5000 feet; habitat coverage: wooded upland and edge 50%, brushy range 20%, open farmaldn 14%, wooded creek and riverbottom 12%, farmyard 4%. December 30. 8:00am to 5:45pm. Weather, morning mostly cloudy, afternoon mostly clear, temperature -21° to -11°F, wind NNW 0-18 mph. Snow cover 2 to 12 inches. Water partly open. 39 observers, 37 in 17 parties, 2 at feeders. Total party hours, 92 (40.75 on foot, 47.25 by car, 4. on skis) plus 2 hrs. at feeders; total party miles, 670 (59.5 on foot, 603.5 by car, 7 on skis).

Observers: Stuart Alexander, Donna and Paul Anderson, Rudi Butot, Anna Cairns, Doug Collister, Dirk de Graaf, Daphne Denton, Tom Dickinson, David Gardiner, Tom Hoskin, Alex and Clio Matheson, Maxine McDowall, Kay Morck, Jamey Podlubny (Compiler, 4520 Bulyea Rd., Calgary, Alberta T2L 2H3), Michael Rogers, Barbara, Ian, Mark and Peter Sherrington, Jack and Phyllis Shier, Andrew Slater, Jack Steeves, Andrew, Don and Philip Stiles, John Thompson, Terry Thormin, Diane Valentine, Greg Wagner, Candace Weir, Rudy and Ruth Wilson.

1977 CHRISTMAS BIRD COUNT - TRUMPETER SWAN NATURALISTS SOCIETY

January 15, 1978. Area covered: Grande Prairie, Wembley, Beaverlodge, Lake Saskatoon and surrounding rural areas. Approximately 159 miles covered over 18 hours.

20 species, 485 individuals, as follows: 1 Goshawk; 9 Ruffed Grouse; 2 Sharp-tailed Grouse; 4 Snowy Owl; 2 Hawk Owl; 4 Hairy Woodpecker; 8 Downy Woodpecker; 2 Gray Jay; 10 Blue Jay; 104 Black-billed Magpie; 2 Common Raven; 1 Common Crow; 65 Black-capped Chickadee; 1 White-breasted Nuthatch; 67 Evening Grosbeak; 11 House Sparrow; 23 Pine Grosbeak; 13 Common Redpoll; 150 Snow Bunting.

Observers: Matilda and Linda Macklin, Gordon Humphries, Francis Ramsden, Donald and Louelle Watson, Gavin and Ellen Craig, Joe La Valley, Walter, Yvonne and Monica MacAlister, Georgia Myrick, Ellen and Norman Brown, Isabelle Perry, George Henn, Don MacDonald and Betty Gaudin.

Submitted by Ellen Craig, Secretary

SUMMARY OF PROVINCIAL RESULTS OF MAY COUNT DAYS FOR 1977 AND 1978: BIRDS AND MAMMALS

by Allen N. Wiseley
#509 - 321 10 St. N.W.
Calgary, Alberta

The efforts by FAN to establish and promote an Alberta-wide species count day have been successful, as this report will attest to. Since 1976 when the first provincial results were published (Alberta Naturalist 6(3)), participation has increased 54 and 21 per cent respectively. The success of the event is further underscored by increases in the number of birds and numbers of species that were seen and the areas which were covered by teams and groups.

The following summary of the counts for the last two years is presented as a separate section for 1977, then for 1978, followed by a comparison of the findings for all three years, and, finally, a conclusion presenting changes in the past format which might improve the count. [Editor's note: Changes have been approved by the FAN Executive and are presented in this issue.]

1977 MAY COUNT DAYS: BIRDS AND MAMMALS

Despite wet and cool weather over most of the province, 117 observers censused nine areas during the May 28-29 weekend. In an estimated 900 observer hours they compiled a total of approximately 18,000 birds of 202 species and 302 mammals of 21 species. Tables 1 and 2 summarize the observations from each area.

Following is background data for each of the nine count areas. In some cases count data were combined where efforts occurred in proximity to other groups. Individual clubs should be encouraged to summarize separate data for teams or locations in their own newsletters.

Lethbridge: May 29. 0800-1700 (8 hours), 13 observers. Weather: cloudy, cool, gusty wind, 7-14°C. Area: within a 20-mile radius of Lethbridge. Mileage: car, 121 miles, on foot, 12 miles. Coordinator: Helen Schuler. (No other participants listed). Comments: Also seen within two weeks (plus or minus) of count day: 13 other yellowlegs; Burrowing Owl; Rock Wren; Swainson's Thrush; Gray-cheeked Thrush; Rufous-sided Towhee; Song Sparrow; Black Tern.

High River/Calgary: May 28 (High River), May 29 (Calgary). 1000-1500 hours; 0900-1330 hours. 5 observers (2 High River; 3 Calgary). Weather: light rain (28th); cloudy, cool, 5°C. (29th). Area: Natural Area (near High River) and Longview Road; north and northwest of Calgary. Observers: L. Hettinger (Coordinator), E. Hebron, K. Kerpen, M. Lore, C. Osborne.

Banff: May 29. 59 party hours, 20 observers, 7 parties. (No weather data). Area: east gate (Banff National Park) to Saskatchewan River crossing. Observers: E. Annand, V. Aziz, A. Brooks, D. and K. Brunton, F. Carleton, M. Dyer, H. Flygare, B. and R. Gordon, L. and G. Holroyd (Coordinator), D. and C. Kraby, M. Lowe, M. and K. McDougall, D. and M. McIvor, D. Smith. Comments: Included in results is the first recorded sighting of Western Bluebirds in the province. Hopefully the notes were sent to the AORC. Other recent sightings included Lewis' Woodpecker,

TABLE 1. Bird Sightings - May Count Day 1977

Species	Lethbridge	High River/ Calgary	Banff	Yamnuska	Stettler/ Buffalo L.	Red Deer	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTAL # INDS.
Common Loon			9	2			1	1		13
Red-necked Grebe			10	1	3		32+			46+
Horned Grebe	2	2	7		28	8	11	2		60
Eared Grebe	2	12			34	3	10			61
Western Grebe			1				+		1	2+
Pied-billed Grebe	1		10		6		5			22
Great Blue Heron	4					2	3			9
Blk.-cr. Night Heron							12			12
American Bittern			3		1		2			6
Canada Goose	124		13	2	72	13	50+			274
Mallard	88+	12	40	5	464	82	62+	25	16	794
Gadwall	8	2			102	10	10+	2	2	136+
Pintail	90+	16	6		37	22	21+	4	2	198+
Green-winged Teal	16		10		13	5	9+	13		66+
Blue-winged Teal	86+	39	64	2	145	95	85+	12	3	531+
Cinnamon Teal	19		10		2	8	1			40
American Wigeon	7	2	5		56	20	21+	13	2	126+
Northern Shoveler	70+	7	7		79	28	58+	33	15	297+
Redhead	15	2			18	20	28+			83+
Ring-necked Duck		2	47	3			21+	26		99+
Canvasback		2	5		44	12	29+			92+
Lesser Scaup	13	4	15		120	25	54+	17	2	250+
Common Goldeneye							7+	16		23+
Barrow's Goldeneye			52	6			+			58+
Bufflehead			1	4	39	1	13+	2		60+
Harlequin Duck			8							8
White-winged Scoter					6		20+			26+
Ruddy Duck	1	2	3		24	8	18+	1		57+
Hooded Merganser			1				1			2
Common Merganser		2	11				5+	1		19+
Red-breasted Merganser							2+			2+
Sharp-shinned Hawk			1							1
Cooper's Hawk			2			1				3
Unident. Accipiter							1			1
Red-tailed Hawk	1	2	3	1	21	5	4+			37+
Broad-winged Hawk								1		1
Swainson's Hawk	1	5			2	4	1+			13+
Rough-legged Hawk									1	1
Bald Eagle			2							2
Marsh Hawk	4				6	1	2+	2	2	17+
Osprey			4	1						5
Merlin	2						3			5
American Kestrel	5		4	1	4	3	2	17		36
Spruce Grouse						2				2
Ruffed Grouse			5	6	5		1+		1	18+
Sharp-tailed Grouse		2								2
Gray Partridge	19									19
Sandhill Crane	1							22		23

TABLE - CONTINUED

Species	Lethbridge	High River/ Calgary	Banff	Yamnuska	Stettler/ Buffalo L.	Red Deer	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTAL # IND.
Sora			15	1	2	7	8+	8		41+
American Coot	204	18	251		51	44	105+	13	5	691+
Semi-palm. Plover					1					1
Killdeer	28	9	5	2	18	21	22+	5	2	112+
Amer. Golden Plover							+			1+
Blk.-bellied Plover	32	2			1		6+			41+
Common Snipe			12	1	3	5	8+	1	3	33+
Long-billed Curlew	1	3								4
Spotted Sandpiper	7	6	18	2	6	3	15	9		65
Solitary Sandpiper			2	1						3
Greater Yellowlegs			2	2	3			1		8
Lesser Yellowlegs						1	4	12	1	18
Willet	7	2			7		2+			18
Ruddy Turnstone							+			1+
Red Knot	2						+			2+
Sanderling	100	1					8+			109+
Semi-palm. Sandpiper	1				50			70		121
Baird's Sandpiper							8	43		51
[Short-bld. Dowitcher	3									3]
Long-billed Dowitcher	11						2			13
Stilt Sandpiper								36		36
Buff-breasted Sandpiper							15			15
Marbled Godwit	26	4			7		2			39
American Avocet	50+	24			130+	3	3+			210+
Wilson's Phalarope	60+	22	14		37	6	8+	36		183+
Northern Phalarope			33					11		44
Herring Gull						(16)		13	3	32
California Gull		1	1		7		1	9	10	29
Ring-billed Gull		6	8		121		34+	1	9	178+
Unident. Gull	581+									581+
Franklin's Gull	541+	200			49	26	25+		41	882+
Bonaparte's Gull							+	3		3+
Common Tern	15		2		1	3	5+			26+
Black Tern	1				35	37	73+	3	1	150+
Rock Dove	24	30	2		25	11	8			100
Mourning Dove	3		5	2	12		1			23
Great Horned Owl	1									1
Pygmy Owl			2							2
Long-eared Owl			1							1
Short-eared Owl							1		5	6
Common Nighthawk				1			1	1		3
Ruby-thr. Hummingbird					1		1			2
Rufous Hummingbird			3							3
Calliope Hummingbird				1						1
Belted Kingfisher	1	1	6	2	1		2			13
Common Flicker	8		24	5	5	2	6	9	23	82
Pileated Woodpecker					1		3			4
Yellow-bell. Sapsucker					3				1	4
Hairy Woodpecker			2	1	2	4	2		3	14
Downy Woodpecker						2	1+		2	5+

TABLE 1- CONTINUED

Species	Lethbridge	High River/ Calgary	Banff	Yamnuska	Stettler/ Buffalo L.	Red Deer	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTAL # IND.
Eastern Kingbird	12	2	4	5	10	5	9	1		43
Western Kingbird	2									2
Eastern Phoebe					2		3	1	3	9
Alder Flycatcher							1	6		7
Unident. Flycatcher			2							2
Least Flycatcher				1	5		40+	24		70+
Western Flycatcher				3						3
Western Wood Pewee				1			5	3		9
Olive-sided Flycatcher				1			1			2
Horned Lark	66+	4	3		4		6		1	84+
Violet-grn. Swallow			10	5						15
Tree Swallow		3	40		85	92	23+	36	27	306
Bank Swallow	11		45	1	235		12+	194		498+
Rough-winged Swallow	8	4	200		32					244
Barn Swallow	24	1	97		127	44	15+	6	6	320+
Cliff Swallow	2		65		500	250	4	445		1266
Purple Martin					14	19	4			37
Gray Jay			20	2				1	3	26
Blue Jay					1	1	3			5
Blk-billed Magpie	49+	2+	40	1	51	39	29+		1	212+
Common Raven			37	10				79	1	127
Common Crow	25+	6+	20		178	47	16+	1	10	303+
Clark's Nutcracker			16							16
Blk-capped Chickadee	5		18	2	2	7	16+	4	6	60+
Mountain Chickadee			5	2						7
Boreal Chickadee			8	1		2	5	1		17
White-br. Nuthatch						1			2	3
Red-br. Nuthatch			5			2	3	2		12
American Dipper		3	2							5
House Wren	6				20	7	21+		5	59+
Long-b. Marsh Wren					1		11			12
Rock Wren							1			1
Gray Catbird					2		2+			4+
Brown Thrasher	1									1
American Robin	51	4+	134	10	58	83	63+	30	33	466+
Varied Thrush			2							2
Hermit Thrush			1							1
Swainson's Thrush			9	3			1	14		27
Veery							3			3
Mountain Bluebird			40	2	31	15	1			89
Western Bluebird			2							2
Townsend's Solitaire			2	1						3
Golden-crowned Kinglet			7							7
Ruby-crowned Kinglet			13	10		2	2			27
Water Pipit			120							120
Sprague's Pipit					2		+			2+
Bohemian Waxwing			42							42
Cedar Waxwing					2	1				3
Loggerhead Shrike					3					3

TABLE 1- CONTINUED

Species	Lethbridge	High River/ Calgary	Banff	Yamnuska	Stettler/ Buffalo L.	Red Deer	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTAL # IND.
Common Starling	171+	4+	21		262	134	49+	16	30	687+
Solitary Vireo			3							3
Red-eyed Vireo				2	2	2	32+	21		59+
Philadelphia Vireo							1	3		4
Warbling Vireo			7	5	7		4+			23+
Tennessee Warbler			3					10		13
Orange-cr. Warbler			5	3			1			9
Yellow Warbler	3	1	3	1	10	4	43+	28	1	94+
Magnolia Warbler							1			1
Yellow-rumped Warbler			125	15			4+	1		145+
Townsend's Warbler			16							16
Blackpoll Warbler			3				3			6
Ovenbird				3			1+	1		5+
Northern Waterthrush								13		13
Connecticut Warbler							1			1
Mourning Warbler							5+	3		8+
Common Yellowthroat	4		16	5			6			31
Wilson's Warbler			12	1						13
Canada Warbler				1				3		4
American Redstart			7	1			5			13
House Sparrow	190+	1	26		131	52	16+	13	35+	454+
Bobolink			1							1
Western Meadowlark	36+	2			30	3	6+			77+
Yellow-headed Blkbird	1044+		5		83	42	30+			1204+
Red-winged Blackbird	100+	12	83	20	230	156	90+	55	59+	805+
Northern Oriole	5	1			24	6	23+		1	60+
Rusty Blackbird									1	1
Brewer's Blackbird	6		25		134	83	13+	6	1	268+
Common Grackle	9				20	6	7+	8		50+
Brn-headed Cowbird			270	15	76	3	10+	19	6	399+
Western Tanager			1				+	1		2+
Rose-br. Grosbeak			1				8+	1		10+
Evening Grosbeak			6			1				7
Purple Finch			2			1	3	3		9
Cassin's Finch			8							8
Pine Grosbeak			3							3
Gray-cr. Rosy Finch			200							200
Pine Siskin			133	3			1		2	139
American Goldfinch	3	1			32	14	4		3	57
White-winged Crossbill			1							1
Savannah Sparrow	6		18	1	4		18	7	3	57
Grasshopper Sparrow			1							1
Baird's Sparrow			1							1
LeConte's Sparrow		2					8	2		12
Vesper Sparrow	25	2			24	3	3+		9	66+
Dark-eyed Junco			49	5		7	11	6	3	81
Tree Sparrow						1				1
Chipping Sparrow	3	1	320	20	5	6	14+	29	2	400+

TABLE 1 - CONTINUED

Species	Lethbridge	High River/ Stettler	Banff	Yamnuska	Stettler/ Buffalo L.	Red Deer	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTAL # IND.
Clay-colored Sparrow		5			20	1	21+	7		54+
Brewer's Sparrow						(1)				(1)
White-crowned Sparrow			18	1					7	26
White-throated Sparrow						3	16+	29		48+
Lincoln's Sparrow			11	3			4	8		26
Swamp Sparrow	(1)						1	3		4
Song Sparrow			9	3	7	1	13+	22		55
Lapland Longspur									2	2
Chestnut-col. Longspur	19									19
Snow Bunting									25+	25+
Unident. Sparrow									3	3
TOTAL NUMBER SPECIES	74	52	114	61	91	78	135	82	54	202

TABLE 2. MAMMAL SIGHTINGS - MAY COUNT DAY 1977

Species	High River/ Calgary	Banff	Yamnuska	Stettler/ Buffalo L.	Fort McMurray	TOTAL # INDIVIDUALS
Pika			1			1
Whitetail Jackrabbit	2			1		3
Snowshoe Hare					1	1
Least Chipmunk		4				4
Chipmunk spp.			+			+
Richardson's Gr. Squirrel	3			8		11
Columbian Gr. Squirrel		155				155
Franklin's Gr. Squirrel				7		7
Golden-mtl. Gr. Squirrel		6				6
13-lined Gr. Squirrel				1		1
Red Squirrel	3	47	+		4	54+
Beaver			1			1
Muskrat	2	10				12
Coyote		3		3		6
Wolf					1	1
Long-tailed Weasel	1					1
Mule Deer		12		1		13
White-tailed Deer			1			1
Moose		1				1
Elk		15				15
Bighorn Sheep		7				7
TOTAL NUMBER SPECIES	5	11	4	6	3	20

Bay-breasted Warbler, Magnolia Warbler and several Blue Jays.

Yamnuska: May 28. 29 Party hours, 10 observers, 4 parties. (No weather data). Area: Yamnuska Natural Area. Observers: V. Aziz, A. Brooks, K. and J. Cale, M. Dyer, G. Holroyd (Coordinator), D. Jaques, D. Kraby, M. and D. McIvor.

Red Deer: May 28, 29. 12 observers, 5 parties. (No weather data) Areas: Red Deer, east of Red Deer, Rimbey, Penhold to Delburne. Observers: M. and E. Glabais, A. Goetz, C. and E. Neufeld (Coordinator), J. and M. O'Brien, G. and S. Pearman, F. Schutz, M. and K. Wood.

Stettler/Buffalo Lake: May 29. 27 observers. 14° to 16°C. Area: C.D. Bird farm (3 km southeast of Mirror); within a 20-mile radius of Stettler. Mileage: by car, 135 miles, on foot, 6 miles. Observers: J. and A. Burrell, E. and G. Clark, M. Croucher, M. Ganske, M. and G. Glabais, E. and T. Grafe, L. and B. Greenlee, V. Hansen, M. and R. Kruger, L. Lohr (Coordinator), A. and V. Maitland, G. O'Shea, E. and B. Smith, D. and K. Strandquist, C.D. and A. Bird, M. McDonald.

Edmonton: May 28, 29. 20 observers, 200 observer hours. Weather: continuous rain of varying intensity; 29th, overcast and rainy. Mileage, 218 by car (2 parties), 10.5 miles on foot (2 parties totalling 5 people only). Areas: Elk Island National Park, Beaverhill Lake, Hastings and Cooking Lakes, Edmonton ravines: Whitemud, Belgravia, Emily Murphy, St. Albert Sewage Lagoons, Wagner bog, Devon town limits to 8 miles north and west. Observers: P. and D. Demulder, G. and P. Greenlee, M. Hennie, L., W., and A. Hochachka, W. Hern, H. and B. Horton, S. Junkind, Mr. and Mrs. L. Matthews, T.V. Narayana, D. and B. Robinson, E. Tull, R. Turner (Coordinator) and T. Wetmore.

Fort McMurray: May 28, 29. 2 observers, 22 observer hours (6, 16). Weather: 28th, overcast, rain, wind NW 11-15 kph, 8°C; 29th, scattered cloud, wind SE 5-15 kmph (later 70 kmph), 5-14°C. Areas: 28th, within town limits; 29th, crown lease #86 (23 miles north of Fort McMurray). Mileage, 35 miles by car, 3 hours on foot. Observers: Sherry and John Gulley.

Wembley/Grande Prairie: May 29, 8 observers (3 parties), 50 observer hours. Weather: steady rain with few interruptions, cold. Mileage: by car, 46.5 miles (2 parties only); walked 6 mi (2 parties only). Areas: Wembley, Tp71 R8, Saskatoon Mountain and road south, Myrick farm (Beaverlodge), MacAlister farm. Observers: W., M., and Y. MacAlister (Coordinator), G., R., and G. Myrick, D. and L. Watson.

BIRDS

Examining Table 1, many species were recorded in only one count area during the 1977 count. of these, 57 species - over half (29) - were reported, unexpectedly, by the Yamnuska and Banff groups, followed by Edmonton (9), Lethbridge (6), four other groups with three each, and Calgary/High River with one.

On the other hand, seven species of birds were seen in all the 1977 count areas, down four from 1976. Those seven included Mallard, Blue-winged Teal, Killdeer, American Robin, Yellow Warbler, Red-winged Blackbird and Chipping Sparrow. Eleven more species were observed in all but one count area. This made a total of 15 that were seen on nearly all counts, down three from the 18 reported in 1976.

Interesting species are not hard to find among the 1977 May Count bird sightings. Like 1976, Cinnamon Teal continued to turn up in good numbers with 19 at Lethbridge,

10 at Banff, and 8 more at Red Deer.

The Banff group continued to amaze the rest of the province with its unusual assortment of findings. The pair of Pygmy Owls at their nest provided the first documentation of a breeding record for these seldom-seen birds in Alberta. One lucky team made the first reported sighting of Western Bluebirds in the province; and they should be encouraged to publish the details. The appearance of Grasshopper and Baird's Sparrows were also firsts for the Banff Park area and, ironically, were not reported from other areas of southern Alberta. Cassin's Finch is another species that "came out of the woodwork" in Banff this year; hopefully, it will become regular there. The Long-eared Owl was a welcomed repeat from 1976 at Banff.

In the remainder of the Province, Blue-winged Teal were noticeably numerous this year, and their total of 531 was second only to Mallards, the most abundant of waterfowl species. Eight Harlequin Ducks at Banff was a good tally for that species.

An interesting first for the May count was the Spruce Grouse recorded at Red Deer. Among the respectable showing of shorebirds in 1977 were 15 Buff-breasted Sandpipers near Edmonton (Beaverhill Lake) and a healthy number of Avocets (130) at Stettler.

Missing from the 1977 count list were species such as the Golden Eagle, Ferruginous Hawk, and Forster's Tern. Hopefully, we can make efforts to include areas frequented by these birds in future counts.

Perhaps bad weather during the count and its resulting effects on bird activity can be cited as a factor in the declines of several flycatcher totals from 1976. Both Eastern and Western Kingbirds, Least Flycatchers and Western Wood Pewees showed this trend. Another handful of species appeared at fewer locations in 1977, including the Yellow-bellied Sapsucker, Golden-crowned Kinglet, Cedar Waxwing, Catbird and Veery.

Contrary to this trend, however, most swallows showed large increases in 1977. It was encouraging to see that 1977 totals of most warblers were larger, hopefully indicating greater efforts to find and identify these less visible birds. The 125 Yellow-rumped Warblers at Banff were noteworthy. All four species of vireo found in Alberta were recorded this year.

The first Rock Wren on the May Count was reported from Edmonton, where it had set up territory near the Provincial Museum in a pile of rip-rap. Bobolinks continued to be recorded at Banff on the count. This year, Yellow-headed Blackbirds were particularly abundant, especially at Lethbridge (1044+), outnumbering Red-winged Blackbirds as the most numerous blackbird.

Highlights among finches and sparrows include 200 Gray-crowned Rosy Finches at Banff, possibly a large flock in migration. A reported Brewer's Sparrow from Red Deer (suspicious) would be a nice range extension north if it was from the prairie population of the species. A few stragglers of two arctic species - the Lapland Longspur and Snow Bunting - were sighted near Wembley, while another arctic-nesting sparrow, the Tree Sparrow, occurred unusually late in the Red Deer area.

MAMMALS

Mammals as a group tend to be overlooked on the May Count between the zeal of bird and flowering plant seekers toward their own special interests. Perhaps better

mammal records will be kept in future years. Nevertheless, a few mammals records (see Table 2) are worth mention.

Banff continued to lead the other groups with a total of 11 species. Highlights included the ground squirrels, which, understandably, were the most recorded mammals. Five species were recorded in the province, and the observations listed include a sizeable total of 155 Columbian Ground Squirrels from Banff.

Perhaps the most exciting mammal sighting of the 1977 count was the wolf at Fort McMurray, reported to be a regular visitor to a local dump. Another interesting find was the long-tailed weasel by the team from Calgary.

1978 MAY COUNT DAYS: BIRDS AND MAMMALS

In contrast to the 1977 count, this year's effort was made in better weather; at least every group had some fair weather in which to conduct its count. With better conditions and a greater level of participation (142 observers) it was "in the cards" that good results should occur.

The background data for the 1978 May Count follows. The counts were held in eight areas, down one (Calgary) from 1977. With encouragement we hope the Calgary club will field a few teams in future counts.

Lethbridge: May 28. 0800-1700 hours. 48 observers. Weather: mostly sunny, wind WSW 35 kph. Area: within 20 miles of Lethbridge; also Bow Island (SW of Lethbridge). Coordinator: Betty Haig. Comments: twenty additional species were reported for the period May 14-June 11.

Banff: May 28. 7 hours. 17 observers (7 parties). No weather data included. Area: Saskatchewan River Crossing (Banff National Park) to Canmore. Observers: A. Brooks, D. Brunton, H. and J. Coneybeare, M. and M. Dyer, R. Harding, L., M., and G. Holroyd (coordinator), F. Klausner, K. and M. McDougall, D. and M. McIvor, J. Meikle, P. Simonsen.

Yamnuska: May 27. 0600-1800 hours (12 hours). 6 observers. No weather data included. Area: Yamnuska Natural Area. Observers: A. Brooks, G. Holroyd (coordinator), J. Meikle, D. and M. McIvor, B. Nelson.

Red Deer: May 28, 0800-1300 hrs. 9 observers (4 parties). Weather: cloudy, light showers, temp. 10°-16°C. Area: Red Deer and within a 5 mile radius of the city; Red Deer to Innisfail to 6 miles east; C. Ellis Farm (east of Blackfalds); W. Nesbitt Farm near Rimbey. Observers: M. and E. Glabais, D. Hazlett, Mr. and Mrs. W. Nesbitt, C. and E. Neufeld (coordinator), F. Schutz.

Stettler: May 27, 28. 25 observers (10 parties). Weather: winds NW, light afternoon showers, temp. 15°-17°C. Area: within circle of 20 mile radius from Stettler, C.D. Bird Farm and Buffalo Lake Narrows (May 28). Observers: C. Bird, J. and A. Burrell, M. Capen, E., O., and G. Clark, M. Ganske, G. Grabill, M. Grafe, V. Hansen, A. and E. Haywood, W. and G. Hewlitt, M. and R. Kruger, L. and L. Lohr, A. and V. Maitland (coordinator), G. and S. O'Shea, E. Smith.

Edmonton: May 27, 28. 13 observers (7 parties). Weather: May 28, Edmonton, clear, warm, bright. Cold Lake, clear, warm to overcast and windy, with thundershowers (afternoon). May 28: Edmonton, partly cloudy, afternoon thunder showers, cool and calm evening. Cold Lake, morning clear, calm, afternoon increasingly cloudy, local

TABLE 3. BIRD SIGHTINGS - MAY COUNT DAY 1978

Species	Lethbridge	Banff	Yamnuska	Red Deer	Stettler/ Buffalo L	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTALS
Common Loon		2	1			3+	2	1	9+
Red-necked Grebe		9		5	13	70	9	4	110
Horned Grebe	32	4		10	+	7+	4	13	70+
Eared Grebe	25	2		24	18	120	2	40	231
Western Grebe					2+	46		3	51+
Pied-billed Grebe		2				6		1	9
White Pelican	1								1
Dble.-crested Cormorant	1								1
Great Blue Heron	5	1				5	1		12
Blk.-crowned Night Heron	2					26			28
American Bittern	1	6			1	2+	2		12+
Trumpeter Swan								9	9
Canada Goose	250	24		24	140+	276	59	29	802+
Mallard	220	68	5	86	204+	190+	68	189	1030+
Gadwall	11				1+	44	4	15	75+
Pintail	271	1		4	34+	154+	16	148	628+
Green-winged Teal	10	3		1		29+	37	5	85+
Blue-winged Teal	162	14	8	21	4+	76+	22	20	327+
Cinnamon Teal	17	8			1	2			28
American Wigeon	30	2		4	4	53+	8	144	245+
Northern Shoveler	76			11	35+	75+	23	14	234+
Wood Duck		2							2
Redhead	66			32	42+	66		9	215+
Ring-necked Duck	4	13	15	1		45+	21	4	103+
Canvasback	14	1			43+	42+		17	117+
Greater Scaup							(6)		(6)
Lesser Scaup	42	6		99	124	195+	27	858	1351+
Common Goldeneye	5	3				20	18	6	53
Barrow's Goldeneye		27	4			11		17	59
Bufflehead		6	5	1	23+	103+	16	42	196+
Harlequin Duck		3							3
White-winged Scoter		34				53		605	692
Surf Scoter		2						10	12
Ruddy Duck	22			24	+	90	6	27	169
Hooded Merganser		4							4
Common Merganser		15		1	5				21
Red-breasted Merganser							3		3
Sharp-shinned Hawk		1				1		1	3
Cooper's Hawk		1	1						2
Red-tailed Hawk	6	1		4	7+	14	2	6	40+
Broad-winged Hawk						2			2
Swainson's Hawk	9			5	3	11		1	29
Rough-legged Hawk	2						2		4
Golden Eagle	1					1			2
Bald Eagle		1							1
Marsh Hawk	14				3	12+	6	3	38+
Osprey		6							6
Prairie Falcon					2				2
Peregrine Falcon						1			1
Merlin						2			2
American Kestrel	18	4	1	1	1	3+	28	27	83+

TABLE 3 - CONTINUED

	Lethbridge	Barff	Yamnuska	Red Deer	Stettler/ Buffalo L	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTALS
Ruffed Grouse			10	1		25	1	1	43
Sharp-tailed Grouse	1					16		4	21
Ring-necked Pheasant	2					6			8
Gray Partridge	16				2	+		3	21+
Sandhill Crane						3	36		39
Sora		21	1	1	2	19	7	2	44
American Coot	70	3		25	8+	71+	10	11	198+
Semi-palmated Plover								9	9
Piping Plover						1			1
Killdeer	148		1	16	23+	23+	75	9	295+
American Golden Plover	2				9	175	48	19	253
Black-bellied Plover	363				15	325		4	707
Common Snipe	1	15	1	4	2	19+	11	4	57+
Long-billed Curlew	103				1+				104+
Whimbrel	7							3	10
Spotted Sandpiper	3	20	5	2	3	131	29	2	77
Solitary Sandpiper	1	1				1		2	5
Greater Yellowlegs		1	1		1	1+	3	1	8+
Lesser Yellowlegs					3	8	20	3	34
Willet	15				7	15			37
Ruddy Turnstone						21			21
Red Knot						53		4	57
Sanderling						200	4		204
Semi-palmated Sandpiper					8	5	2	17	32
Least Sandpiper	2					5	2	1	10
"Peep" Sandpiper spp.						405			405
White-rumped Sandpiper						87			87
Baird's Sandpiper						101	2		103
Pectoral Sandpiper						16	6	5	27
Dunlin						1		1	2
Short-billed Dowitcher							2		2
Long-billed Dowitcher						14		29	43
Stilt Sandpiper						11			11
Buff-breasted Sandpiper						76	4		80
Marbled Godwit	31				2	26			59
American Avocet	12				2	8			22
Wilson's Phalarope	81			2	18	52		3	156
Northern Phalarope						2+			2+
Parasitic Jaeger						1			1
Herring Gull	17			3	1	+	603	18	642+
California Gull	4	2			3+	25	626	18	678+
Ring-billed Gull	11	2		12	7+	131+	7	28	198+
Mew Gull								4	4
"White-headed" Gull spp.	356				9	+			365+
Franklin's Gull	180				10+	178+	11	210	589+
Bonaparte's Gull	1					70	1	200	272
Forster's Tern						30			30
Common Tern	31				5	31		1	68
Arctic Tern						(2)			(2)
Black Tern	20			206	7	146	97	65	541
Rock Dove	56			14	15	19+			104+

TABLE 3- CONTINUED

	Lethbridge	Banff	Yamnuska	Red Deer	Stettler/ Buffalo L	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTALS
Mourning Dove	47	3			4	+	1		55+
Great Horned Owl	3	2				1+			6+
Burrowing Owl	6								6
Unidentified Owl spp.								1	1
Short-eared Owl	1								1
Common Nighthawk			1			1	3	1	6
Ruby-throated Hummingbird				2	3+				5+
Rufous Hummingbird			3						3
Belted Kingfisher	4	4				2	2		12
Common Flicker	21	9	10	3	7	6	17	19	92
Pileated Woodpecker			1		1	2+			4+
Yellow-bellied Sapsucker		1	2	1		4	3	5	16
Hairy Woodpecker		1				6	2	2	11
Downy Woodpecker	3	3		3		1+		3	13+
Blk.-b. 3-toed Woodpecker						1+			1+
Eastern Kingbird	32	3	1	8	16	35+	2	5	113+
Western Kingbird	39								39
Eastern Phoebe	2		1		9	4+	2	2	20+
Say's Phoebe						1			1
Alder Flycatcher	1					11			12
Unident. Traill's Flycatcher				1					1
Least Flycatcher	1	8	10	4		78+	29		130+
Dusky Flycatcher		1						1	2
Hammond's Flycatcher		1	1						2
Western Flycatcher	(1)								(1)
Western Wood Pewee	9	6	1			13	2	2	33
Olive-sided Flycatcher						1+			1+
Horned Lark	245					13	56		314
Violet-green Swallow	50	7							57
Tree Swallow	40	35	15	393	69+	77+	29	41	699+
Bank Swallow	164	46	5	100		23	43	150	531
Rough-winged Swallow	101	15		20	4	1			141
Barn Swallow	104	42		35	75+	40+		11	307+
Cliff Swallow	95	116		5	31	13	926		1186
Purple Martin				4	21	23			48
Gray Jay		7	1			1+	9		18+
Blue Jay						27+	2	1	30+
Black-billed Magpie	132	40	3	29	19+	60+		46	329+
Common Raven		61	15				84	4	164+
Common Crow	67	38		60	115+	80+	20	41	421+
Clark's Nutcracker		11							11
Black-capped Chickadee	8	3		2	1	13+	3		30+
Mountain Chickadee		12	2						14
Boreal Chickadee		9				1	3		13
White-breasted Nuthatch						2			2
Red-breasted Nuthatch	5	8				4			17
American Dipper		1							1
House Wren	23			4	35	5+		3	70+
Winter Wren						1			1
Long-billed Marsh Wren	10				1	21			32
Short-billed Marsh Wren						1			1

TABLE 3 - CONTINUED

	Lethbridge	Banff	Yamnuska	Red Deer	Stettler/ Buffalo L	Edmonton	Fort McMurray	Wembley/ Gr.Prairie	TOTALS
Gray Catbird						1			1
Brown Thrasher	12								12
American Robin	172	45		34	43+	76+	58	31	459+
Varied Thrush		3							3
Hermit Thrush	15		1			+			16+
Swainson's Thrush	19	5				12+	8		44+
Gray-cheeked Thrush						1			1
Veery	9				1	15			25
Unidentified Thrush						1			1
Mountain Bluebird	11	13		24	33	6			87
Townsend's Solitaire		2							2
Golden-crowned Kinglet		5	1			2			8
Ruby-crowned Kinglet		58	10			13	2	1	84
Water Pipit		42				1			43
Sprague's Pipit	50					2			52
Cedar Waxwing	187	5		2					194
Loggerhead Shrike					1				1
Common Starling	276	35		91	70+	125+	23	55	675+
Solitary Vireo		1				1			2
Red-eyed Vireo	1		2		3	32+	3		41+
Philadelphia Vireo	3	1				4	1		9
Warbling Vireo		17	5			14		6	42
Black & White Warbler			1			3+		2	6+
Tennessee Warbler		2				35+	33		70+
Orange-crowned Warbler		14	2			1	6		23
Yellow Warbler	25	9	1	3	6	77+	26		147
Magnolia Warbler	4	5				4	2		15
Cape May Warbler						3+			3+
Yellow-rumped Warbler	1	45	5			16+	9		76+
Townsend's Warbler		12							12
Black-thr. Green Warbler						2	2		4
Blackburnian Warbler						4			4
Chestnut-sided Warbler						4			4
Bay-breasted Warbler						3			3
Blackpoll Warbler		4							4
Palm Warbler						+			+
Ovenbird			2			10+	1		13+
Northern Waterthrush		11	1			1	19		32
Connecticut Warbler						1			1
Mourning Warbler						4+			4+
MacGillivray's Warbler		3							3
Common Yellowthroat	7	50	25		1	15+			98+
Wilson's Warbler	2	24	1			1			28
Canada Warbler						4	5		9
American Redstart	11	46	5			1	3		66
House Sparrow	300	5		31	33+	43+	16	19	447+
Bobolink		5							5
Western Meadowlark	103			1	9	17			130
Yellow-headed Blackbird	470	3		63	95	60+	2	9	702
Red-winged Blackbird	260	215	10	122	160+	117+	181	142	1207+

TABLE 3 - CONTINUED

	Lethbridge	Banff	Yamnuska	Red Deer	Stettler/ Buffalo L	Edmonton	Fort McMurray	Wembley/ Gr. Prairie	TOTALS
Northern Oriole	31			3	31+	36			101+
Brewer's Blackbird	123	12		22	59	59+	35	12	322+
Common Grackle	35				2+	23	11	4	75+
Brown-headed Cowbird	70	175	20	5	15+	56+	9	34	384+
Western Tanager		1				2	4	2	9
Rose-breasted Grosbeak						7+	5		12+
Evening Grosbeak	1	8				7			16
Purple Finch		10		1		3	1	1	16
Cassin's Finch		7							7
Pine Siskin	19	42	1			2			64
American Goldfinch	21			1	1	8+			31+
Red Crossbill		1							1
Rufous-sided Towhee	5								5
Savannah Sparrow		22			5	28+	11	56	122+
(Grasshopper Sparrow)	(11)							(1)	(12)
LeConte's Sparrow						8+	2		10+
Vesper Sparrow	39	2	1		16+	17		21	96+
Lark Sparrow	3								3
Dark-eyed Junco		21	2			10	8	6	47
Chipping Sparrow	61	273	50	2	1+	41+	29	3	460+
Clay-colored Sparrow	21	2	1	2	14	51+	15		106+
Brewer's Sparrow	1								1
Harris' Sparrow							2		2
White-crowned Sparrow	2	32		1			5		40
Golden-crowned Sparrow		1							1
White-throated Sparrow		1			2	20+	48+		71+
Fox Sparrow		1							1
Lincoln's Sparrow		24	3			15+			42+
Swamp Sparrow	1	1				3	11		16
Song Sparrow	1	12	2	1	7	25+	40	14	102+
Unidentified Sparrow						5			5
Lapland Longspur	12					6	34		52
Chestnut-collared Longspur	108								108
Snow Bunting							4		4
TOTAL NUMBER OF SPECIES	119	120	52	65	86	177	105	97	232

() denotes findings which should have been supported by additional field notes or descriptions.
+ indicates that one or more were seen or could have been added with extra effort.

thunder showers. Areas: Parks - Emily Murphy, Elk Island, Terwillegar, Cold Lake, Moose Lake; Ravines - Kinnaird, Whitemud, Belgravia; Lakes - Cooking, Hastings, Beaverhill, Jessie (Bonneyville), Big Lake/Wagner Bog; Nisku sloughs, Sturgeon River, Beaumont, Perryville, roads near St. Alberta. Observers: L. Bogaert, B. and G. Bulmer, D. Dekker, P. DeMulder, C. Harper, S. Johnson, R. McElhaney, T. Thormin, E. Tull, E. Wallace, T. Wetmore, A. Wisely (coordinator). Comments: The total of 177 species included 143 in the Edmonton (50-mile radius) area. Two teams set provincial records for single day totals (137, 139), surpassing the previous record from the Red Deer area of 125.

Fort McMurray: May 27, 28. 9 observers. Weather: May 27, cool and foggy to sunny and warm (later). May 28 - cloudy, wind SE8-15 kph, temperature 8° to 20°C. Areas: Gregoire Lake, Fort McMurray townsite and surroundings, Highway #63 north to AOSERP camp north of Mildred Lake, Lease #86. Observers: R. Chappel, R. Foreman, B. and R. Frey, S. and J. Gulley (coordinator), B. Martin, D. Spencer, B. Wylie.

Wembley/Grande Prairie: May 27, 28. 16 observers. Approximately 80 observer hours. Mileage: by car, 207. Weather: May 27, sunny with cloudy periods, temperature 10°-15°C, afternoon and evening winds SW; May 28, cold and windy (10°C, W. wind) with threat of rain (Wembley); rain squalls and windy near lakes. Areas: Wembley and surroundings, Buffalo Lakes, Sexsmith, La Glace and surroundings, Hermit, Bear, Cutbank, Saskatoon and Uswells Lakes, cattle lease south of Wapiti River and west of Smoky River.

BIRDS

Six of the eight areas showed increases over 1977 in the numbers of species counted. In terms of per cent increase, Wembley/Grande Prairie led with a spectacular 80 per cent increase, followed by Lethbridge at 61 per cent, Edmonton 31 per cent, Fort McMurray 28 per cent, Yamnuska, 17 per cent, and Banff 5 per cent. Stettler decreased 5 per cent, and Red Deer decreased 16 per cent. The 232 species found by all counts represented a 15 per cent increase over 1977.

Edmonton's count of 177 species was the highest among the eight areas, due in large measure to two competing teams that accounted for 165 species between them. Banff and Lethbridge were only one species apart at 120 and 119 respectively, while Fort McMurray teams found 105 species, followed by the other groups.

Not surprisingly, the large increase in species of birds from 202 to 232 added several new and interesting birds to the list of birds seen on the May Count. Birds not recorded on previous counts include 6 warbler species, the Black & White, Cape May, Blackburnian, Chestnut-sided, Palm and Black-throated Green, all of which were located by the Edmonton teams, two new wrens, the Winter and Short-billed Marsh Wrens, as well as the Peregrine Falcon, Piping Plover, Parasitic Jaeger, Black-backed 3-toed Woodpecker, and Gray-cheeked Thrush, which were also added to the list by Edmonton teams. Two other new species, Whimbrel and Dunlin, were each seen on two count areas. New birds added by Lethbridge include the White Pelican, Double-crested Cormorant and Burrowing Owl. New to the count from Banff were the Wood Duck, Hammond's Flycatcher and the Golden-crowned Sparrow, while Fort McMurray birders found the Harris' Sparrow and Greater Scaup (suspicious). Wembley/Grande Prairie is the first count area to report the Trumpeter Swan and Mew Gull, while it shared the previously mentioned sightings of Whimbrels with Lethbridge, Surf Scoters with Banff, and Dunlins with Edmonton.

Among the results on Table 3 for the usual selection of birds, it seems that more areas in 1978 reported species such as Common Loons, Red-necked Grebes and American Bitterns than 1977, and the numbers of most grebes, except Pied-bills, were higher.

Waterfowl were also well-represented as usual among the area counts, and most species had either moderate or spectacular increases over 1977. Canada Geese increased by nearly four times. Wembley/Grande Prairie counted large totals of Lesser Scaup and White-winged Scoters.

Most of Alberta's hawks and eagles were reported in 1978, including four species of falcon. Ferruginous Hawks were notably absent this year. An excellent variety of shorebirds was found, a record 30 species, and in large numbers, including 253 American Golden Plovers, 707 Black-bellied Plovers, 57 Red Knots and a surprising 80 Buff-breasted Sandpipers.

Lethbridge accounted for half of the province's owl sightings, including 6 Burrowing Owls. Missing from the list of hummingbirds from last year was the Calliope, usually found by the Banff group.

Numbers of most woodpeckers, flycatchers and swallows in 1978 were admirable as well as a few species such as the Brown Thrasher, Hermit Thrush, Veery and Ruby-crowned Kinglet. The suspicious 13 Hermit Thrushes and 19 Swainson's Thrushes at Lethbridge were unusually late; care must be taken to identify spotted thrushes at this time, when Gray-cheeked Thrushes (the latest migrant thrush) might be expected.

A noteworthy decrease from 60 to 30 occurred in numbers of Black-capped Chickadees. Good coverage was probably the reason that 50 Sprague's Pipits were counted at Lethbridge, while the total of 187 Cedar Waxwings there possibly represented newly-arrived flocks. Increases occurred in the numbers of most warblers and in the number of warbler species reported (from 15 to 23).

For the third year in a row, Banff recorded Bobolinks and, surprisingly in three years, has been the only spot during the May count to have them. On the other hand, Pine Grosbeaks were not recorded by Banff in 1978.

Among sparrows notable increases are evident in the Clay-colored, White-crowned, White-throated, Lincoln's, Swamp and Song Sparrows, and Chestnut-collared Longspur, while unexplained decreases are shown by counts of American Goldfinches and Dark-eyed Juncos.

Birds that were seen on all count areas this year numbered 13 species, nearly double the 1977 figure of 7. Those species include Mallard, Blue-winged Teal, American Kestrel, Common Snipe, Spotted Sandpiper, Common Flicker, Eastern Kingbird, Tree Swallow, Red-winged Blackbird, Brown-headed Cowbird, Chipping Sparrow and Song Sparrow. Of these only three had not been recorded by all count areas in either 1976 or 1977, the Kestrel, Cowbird and Song Sparrow. Three of the species, Mallard, Red-winged Blackbird and Chipping Sparrow, were seen in all areas in both 1976 and 1977.

Species which were reported on only one count area numbered 64 in 1978, up 7 from 1977, but this number was equal in percentage (28 per cent) of total species to that of 1977. The distribution of those species among the count areas shows Edmonton with 26, Banff 19, Lethbridge 10, Fort McMurray 4, Wembley 3 and Stettler 2, while Red Deer and Yamnuska had no exclusive bird species.

MAMMALS

The mammals for the 1978 May Count are listed on Table 4. In general, the findings are not nearly comparable to those of 1977. The total of 12 species was 8 less than the list for 1977. Only one species was new to the count in 1978, the groundhog, and the Wembley/Grande Prairie total of 12 was noteworthy. One group of mammals in which our efforts slipped was the ground squirrels, which are represented by only one species compared to five in 1977.

TABLE 4. MAMMALS SIGHTINGS - MAY COUNT DAY 1978

Species	Banff/ Yamnuska	Red Deer	Edmonton	Wembley/ Gr.Prairie	TOTALS
Snowshoe Hare			1	1	2
Richardson's Ground Squirrel		39			39
Red Squirrel	30	3		1	34
Chipmunk spp.	1				1
Groundhog				12	12
Muskrat	5	1			6
Beaver	1		1	1	3
Black Bear				1	1
Coyote		1		1	2
Mule Deer	3				3
White-tailed Deer		1			1
Moose				2	2
TOTAL NUMBER SPECIES	5	5	2	7	12

COMPARISON OF THE YEARS 1976-1978 (BIRDS)

Data from each of the past three years' counts are shown on Table 5. The table shows that the number of observers has increased greatly, with a corresponding increase in the species of birds, in the total numbers of birds recorded, and in the mean numbers of birds per species. Because the number of species in Alberta is limited, the increase in participation would have had negative effects on the mean number of species per observer, as is the case. Unusual or unpredictable is the fact that the mean number of birds per observer has also increased. This could indicate that either the effort by or efficiency of each observer has increased, better locations for birds are being surveyed or that simply more birds were counted, either because numbers had increased, or the birds were more obvious. Because of the many ways the various area counts are conducted and the lack of back ground data from each count, little can be said concerning which of the factors explain the trend we see on Table 5.

TABLE 5. Provincial Data Summary of Birds, May Count Days 1976-1978

year	# of areas	observers	hours/observer	bird species	total birds	$\bar{x}$ birds/species	$\bar{x}$ birds/observer	$\bar{x}$ species/observer
1976	8	64	7.8	191	9664	50.6	151.0	2.98
1977	9	117	7.7	202	18016	89.2	154.0	1.72
1978	8	142	7.7	232	26293	113.3	185.2	1.63

We can also look at these data broken down for each count area for the three-year period. Table 6 gives the comparisons for nine count areas that held counts twice or more times in that period.

Table 6 shows a great amount of variation between years for each area in terms of birds per species, birds per observer, and species per observer. The year-to-year trends for each area don't always follow the trends in the provincial data (Table 5). Inconsistency in the data from various clubs has made comparisons difficult, because of the variety of factors that affect the figures. Thus any changes in bird numbers would be difficult to demonstrate under the present format of the May Count. Hopefully, with a standardized format and better data control on the count, an increase in the reliability of the information will be gained.

FUTURE CHANGES

A great deal of effort has been expended in past years by the participants in the May Counts, evident from the estimated 1100 observer hours in 1978. To make the best use of this time we should try to get the most information, as accurately and as purposefully as we can. Toward this, changes have been made in the format of the count, and these have been adopted by FAN for the 1979 May Count Weekend (see article, this issue).

The first change in format is that in order to make the data comparable from year to year, a certain set of locations should be surveyed each year, and in a similar manner. Secondly, our data should be valuable, ie. locations of importance should be chosen within count areas, locations such as unique natural areas, park, areas in need of protection, or just places with a variety of habitats or concentration of wildlife.

In order to improve our accuracy, we should insist on descriptive evidence when unusual sightings or difficult identifications are made. Also, by spreading out the experienced observers among teams, on-the-spot verification can be made, coverage will be more efficient and a learning experience can be provided to beginners. Data sheets with appropriate spaces for all information will also improve accuracy and completeness during and after the count.

The concept of the count in regard to the above is that of a cooperative type of count, similar to the Christmas Bird Count. It does not eliminate the possibility of competitions between teams or clubs, as long as a set of locations and methods of

TABLE 6. SUMMARY OF BIRD DATA FOR THREE YEARS BY AREAS.

Location/Year		Observers	Number Birds	Species	Birds/Observer	Species/Observer	Birds/Species
Lethbridge:	1976	16	3041	97	190.1	6.1	31.4
	1977	13	3969	74	305.3	5.7	53.6
	1978	47	6538	119	139.1	2.5	54.9
Banff:	1976	9	1279	89	142.1	9.9	14.4
	1977	20	3189	114	159.5	5.7	28.0
	1978	17	2167	120	127.5	7.1	18.1
Yamnuska:	1976	6	155	40	25.8	6.7	3.9
	1977	10	124	61	12.4	6.1	2.0
	1978	6	279	52	46.5	8.7	5.4
Calgary/	1976	2	-	102	-	51	-
High River:	1977	5	505	52	101.1	10.4	9.7
	1978	-	-	-	-	-	-
Red Deer:	1976	14	2164	82	154.6	5.9	26.4
	1977	12	1692	77	141.0	6.4	22.0
	1978	9	1722	65	191.3	7.2	26.5
Stettler/	1976	12	1389	82	115.8	6.8	16.9
Buffalo L.:	1977	27	4376	91	162.1	3.4	48.1
	1978	25	1902	86	76.1	3.4	22.1
Edmonton:	1976	5	-	124	-	24.8	-
	1977	20	1760	135	88.0	6.8	13.3
	1978	13	6030	177	463.8	13.6	34.1
Fort	1976	2	694	65	347.0	32.5	10.7
McMurray:	1977	2	1650	82	825.0	41.0	20.1
	1978	9	3912	105	434.7	11.7	37.3
Wembley/	1976	-	-	-	-	-	-
Grande	1977	8	437	54	54.6	6.8	8.1
Prairie:	1978	16	3706	97	231.6	6.1	38.2

sampling them remain consistent for annual comparison. Thus, all clubs would be free to choose their own methodology, just so that useful data results. Ideally, any changes in numbers of birds or their occurrence could then be attributable to one or a number of identifiable factors. Who knows what useful purposes these data could be applied in twenty years? The model of the Christmas Bird Count has served as a data base for monitoring many species of birds over several decades. Let us try to transform this count's data, representing three times as many species, into a form that will also be scientifically useful in future years.

Postscript to 1978 May Count Day Results

A late contribution to the 1978 results came from Jamie Podlubny of Calgary, who represented the only Calgary effort received. He spend 5-1/2 hours beginning at 0530 hours on Mah 27, surveying birds in the West Calgary/Edworthy Park area, in calm and clear weather, temperature 10-20°C.

Birds seen totalled 37 species and included the following list: Canada Goose 4; Mallard 10 (1 pr, 8 young); Common Merganser 2; Cooper's Hawk 1; Red-tailed Hawk 2; American Kestrel 2; Gray Partridge 1; Spotted Sandpiper 1; Ring-billed Gull 26; Common Tern 2; Rock Dove 2; Common Nighthawk 1; Common Flicker 2; Eastern Kingbird 2; Least Flycatcher 1; Western Wood Pewee 1; Bank Swallow 200-250; Rough-winged Swallow 2; Black-billed Magpie 2; Common Crow 4; Black-capped Chickadee 3; Red-breasted Nuthatch 3; House Wren 5; Gray Catbird 6; Brown Thrasher 1; American Robin 10-15; Veery 1; Starling 8; Warbling Vireo 1; Yellow Warbler 4; Wilson's Warbler 1; Northern Oriole 5; Brown-headed Cowbird 5; American Goldfinch 3; Chipping Sparrow 3; Clay-colored Sparrow 6; and Lincoln's Sparrow 4.

RULES FOR MAY BIRD COUNT

OBJECTIVES

The promotion of a province-wide, two-day effort to identify and count birds in local areas in order to (1) gain an indication of numbers for many of the province's bird populations and to note annual changes in numbers; (2) measure progress in migration for many species of birds; (3) provide a format for education of participants in field identification, habits and habitats of local birds, and proper methods of taking field records; and (4) encourage cooperative efforts toward an understanding of local natural history.

These objectives are somewhat different than in the past. They are the goals of FAN and the following rule changes are aimed at achieving them. The essence of the changes is that the count would include a cooperative portion in each count area, a portion in which coverage is repeated annually in a given set of locations. Other coverages would be reported separately, not eliminating the possibility of competition or exploratory efforts.

TIMING

The May Count Weekend, designated by FAN, should be during the last part of May, when a large majority of summer resident birds are on territories. Clubs may use all or part of that weekend, weather permitting.

LOCATIONS

Areas represented by clubs, or areas where counts can be organized annually within the province. The count areas should be limited to within a 50-mile radius of a town or club centre. The count could take place throughout the circle or any locations within it, depending upon the club or members' preferences, priorities, or available personnel.

Clubs should choose locations for counting within their areas according to the following criteria: (1) a natural area of importance; (2) a location that has a great diversity of birds; (3) a location with an unusual population not already monitored by a government agency; and/or (4) a location that is convenient and easily censused by local people. These locations should be listed on a priority basis to ensure annual coverage to the most important spots. Comparison would become more valid with similar coverage. Routes could also be selected, especially where roadside ponds or small natural areas are numerous along them.

PROCEDURES

After locations are selected, experienced people should be teamed with inexperienced to census the chosen locations. This should encourage participation, ensure accuracy, and help the efficiency and speed of counting. Ideally, teams of 2-4 should work best, but larger groups would be necessary if inexperienced people are abundant. Logistics should be handled by the coordinator (and ?) with efficiency as a goal. To be of value, the data should be accurate and complete. Carefully kept records are important to gain the most information from the data. A data

TEAM FIELD FORM

Date_____ Count Name_____ Team _____

Observers_____,_____,_____,_____

_____,_____,_____,_____

Team Hours_____ Observer Hours_____ Mileage (team) walked ___km

Mileage (team) driven_____km Other_____ km

Weather Conditions: Temp. _____ to _____^{o}C. Wind Speed ____ to ____, Direction ___

to ____ Cloud Cover _____/10ths to ____10ths Precipitation_____

Species	Locations									Notes

COORDINATOR SUMMARY

Count Name_____ Count Date(s)_____

Number of Observers: Day 1_____ Day 2_____

Locations Surveyed Day 1:

Locations Surveyed Day 2:

Time of Count: Day 1 _____ to _____ Day 2 _____ to _____

Observer Hours: Day 1 _____ Day 2 _____ Team Hours: Day 1 _____ Day 2 _____

Team Mileage: Driven _____ km Walked _____ km Other _____ km

Team Hours: Driven_____ Walked_____ Other _____

May Weather (from nearest weather station):

Temperature _____°C. above/below monthly mean of ____°C.

Precipitation _____ cm above/below monthly mean total of _____ cm.

Count Weekend Weather:

Day 1: Temp. ____ to ____ °C Wind Speed ____ to ____ km/hr

Wind Direction ____ to ____ Cloud Cover ____ to ____ tenths

Precipitation ____ cm of ____ from ____ to ____ (time)

Day 2: Temp. ____ to ____ °C Wind Speed ____ to ____ km/hr

Wind Direction ____ to ____ Cloud Cover ____ to ____ tenths

Precipitation ____ cm of ____ from ____ to ____ (time)

LIST OF OBSERVERS:

Species Checklist and Totals: attach checklist or report sheet, include descriptions

NUMBER OF SPECIES_____

Other species seen within 7 days of count:

Comments:

sheet has been devised (tear-out following this article) to fill out in the field. After the count these can be collected by the coordinator and the data transferred to his summary sheet (also following this article) which can then be duplicated and sent to the provincial coordinator. Data sheets should be kept on file with each club, where the data can be available for future reference.

Accuracy would also be helped by the verification of sightings by both experienced and inexperienced observers using their field guides. In the case of rare or unusual birds, or birds which are difficult to identify, notes should be included, giving descriptions of key field marks, of songs, or of habitat information, and attached to field forms or written in the spaces provided. Counts of each species should be made accurately to 25 individuals, beyond which estimates could be made to the nearest 10 up to 100, nearest 25 up to 250, nearest 50 to 500, and 100 to 1000, etc. Unidentified birds should be listed in the nearest taxonomic category possible, or be described. Each team should stay together, each member making attempts to identify each species recorded.

1979 MAY COUNT DAY

THIS YEAR'S MAY COUNT DAY WILL BE HELD ON THE WEEKEND OF MAY 27-28. WE URGE FAN MEMBERS TO PARTICIPATE IN YOUR AREA'S COUNT, AND, IF THERE IS NO COUNT HELD IN YOUR AREA, ORGANIZE ONE! YOUR HELP IS ESSENTIAL AND WILL BE APPRECIATED.

RESULTS OF THE 1978 MAY SPECIES COUNT DAY (PLANTS)

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The following is a tabulation of the results of the botanical portion of the 1978 May Species Count Day (May 27-28). The areas from which reports were received have been listed in approximate latitudinal order from south to north. A total of 14 areas were covered during the 1978 count with a record number of people, 75, participating.

Some changes have been made in the method of reporting from that used for the 1977 count. A number of species which can be considered synonymous or so similar as to be difficult to distinguish in the field have been lumped together (eg. *Astragalus agrestis* and *A. goniatus* under *A. agrestis; Hedysarum boreale* and *H. mackenzii* under *H. mackenzii*). Unidentified species have not been included in the totals unless no other species in that genus was recorded. The more questionable flowering reports and those for which the identity of the species could not be determined with certainty (i.e. only a common name given) have been omitted, but there remains a number of reports in the following list which must be treated with suspicion.

With the above changes a total of 266 species were recorded in flower during the 1978 count. This is fewer than during the 1977 count (289), but comparable to the number reported in 1976 (255) (Hrapko, 1978). The use of a prepared checklist made compilation of the results easier. Continued use of such a checklist is expected for the 1979 count.

Following is a list of observers, totals and other pertinent remarks for each area.

1. Lethbridge: Elizabeth Hall recorded 46 species in flower at Six-mile Coulee.

2. Old Woman Buffalo Jump: Loren and Marguerite Hettinger recorded 10 species in flower in this area northeast of Cayley.

3. High River: A total of 9 species were recorded in flower at the Nature Sanctuary by Loren and Marguerite Hettinger.

4. Calgary: Three groups of observers covered the northern part of the city with a combined total of 77 species reported in flower. Participants were Mary Lore, Cathy Osborne, Eleanor Hebron, Beryl Hallworth and Margaret Clarke.

5. Forestry Trunk Road: Twenty-one species were reocrded in flower approximately 16 km northwest of Cochrane by Margaret Clarke.

6. Yamnuska: As usual, a large number of species in flower were recorded in this area - 84. Observers included Allan Brooks,

Diane and Mike McIvor, Joyce and Keith Cole, Bunty Nelson, Geoff Holroyd, Jenny Meikle and Bob and Mary Smith

7. Banff National Park: Four groups of observers submitted reports from the park for a total of 73 species seen in flower. Allan Brooks, Diane and Mike McIvor, Mary Dyer, Margery McDougall, Liz Holroyd, Bob Smith, Jake Dyck, John Cuddeford and Janet Marsh were included among those taking part.

8. Dry Island Buffalo Jump Provincial Park: J.B. Posey, D. Wales, H. Harris, T. Cox, E. Neufeld, M. O'Riordan, F. Schutz, A. Lees, J. Bruinsma and J. Wales recorded 62 species in flower in and near the park.

9. Stettler - Buffalo Lake - Mirror - Erskine - Ewing Lake: The honour of reporting the greatest number of species in flower this year goes to the Buffalo Lake Naturalists. Five reports were received from this area of central Alberta which, when combined, resulted in a total of 120 species observed in flower. Participants were Edith and Grant Clarke, Virginia and Adam Maitland, Deirdre Code, Bertha Clarke, Mr. and Mrs. Wilf Hewlett, Mr. and Mrs. Art Haywood, Mrs. Grace O'Shea and grandson, Lloyd and Laverne Lohr, Marj Ganske, Max Capen and C.D. Bird.

10. Jasper National Park: Ian Corns recorded 44 species in flower in the Montane zone of the park.

11. Edmonton: J.D. Johnson and G. Krumlik recorded 57 species in flower within the city limits.

12. Grande Prairie: The Trumpeter Swan Naturalists reported 49 species in flower from a number of areas surrounding Grande Prairie. Observers included Joan Yates, Donald and Louella Watson, Alvin and Edna Moreside, Gavin and Ellen Craig, Joe LaValley, Robert and Lorna Dahl and Yvonne MacAlister.

13. Sandy Lake: Helen Schalkwyk recorded a total of 35 species in flower in this area northwest of Edmonton.

14. Fort McMurray: The Fort McMurray group recorded a total of 91 species in flower. Marion Horrocks, Margaret Walker, Linda Matula, Pat Connoly, Barbara Frey, Frances and Bernard Cantin and Alan and Sandra Nicholson were the observers.

LITERATURE CITED

Hrapko, J.O. 1978. Results of the 1977 May Species Count Day (Plants). Alberta Naturalist 8(1): 47-60.

1978 MAY DAY COUNT: PLANTS IN FLOWER

(Nomenclature as in FLORA OF ALBERTA (E.H. Moss, 1959))

FAMILY SCIENTIFIC NAME	COMMON NAME	Lethbridge	Old Woman Buffalo Jump - Cayley	High River	Calgary	Forestry Trunk Road NW of Cochrane	Yamnuska	Banff National Park	Dry Island Buffalo Jump Provincial Park	Stettler - Buffalo Lake - Mirror	Jasper National Park	Edmonton	Grande Prairie	Sandy Lake	Fort McMurray
PINACEAE (Pine Family)															
Juniperus communis	Ground Juniper								+						
J. horizontalis	Creeping Juniper				+										
Larix laricina	Tamarack									+					
Picea glauca	White Spruce									+					
P. mariana	Black Spruce														+ +
Pseudotsuga menziesii	Douglas Fir						+	+							
JUNCAGINACEAE (Arrow-grass Family)															
Triglochin maritima	Seaside Arrow-grass				+										
GRAMINEAE (Grass Family)															
Agropyron cristatum	Crested Wheat Grass				+					+					
A. smithii	Western Wheat Grass				+										
Bouteloua gracilis	Blue Gama Grass				+										
Calamagrostis purpurascens	Purple Reed Grass										+				
Festuca scabrella	Rough Fescue				+										
Hierochloe odorata	Sweet Grass				+		+			+	+				
Hordeum jubatum	Foxtail Barley									+					
Poa spp.	Bluegrasses		+				+								
P. alpina	Alpine Bluegrass							+							
P. pratensis	Kentucky Bluegrass									+		+			
P. secunda	Sandberg Bluegrass				+										
Oryzopsis asperifolia	Rice Grass										+	+			
CYPERACEAE (Sedge Family)															
Carex spp.	Sedges						+	+	+	+					
C. aurea	Golden Sedge				+		+						+		
C. concinna								+			+				
C. concinnoides								+							
C. eburnea											+				
C. filifolia	Thread-leaved Sedge	+			+						+				
C. lanuginosa					+										
C. richardsonii											+				

FAMILY SCIENTIFIC NAME	COMMON NAME	Lethbridge	Old Woman Buffalo Jump - Gayley	High River	Calgary	Forestry Trunk Road NW of Cochrane	Yamnuska	Banff National Park	Dry Island Buffalo Jump Provincial Park	Stettler - Buffalo Lake - Mirror	Jasper National Park	Edmonton	Grande Prairie	Sandy Lake	Fort McMurray
Carex scirpoidea											+				
C. sprengelii	Sprengel's Sedge				+										
Eleocharis acicularis	Need Spike Rush				+					+					
E. palustris	Spike Rush				+										
Eriophorum scheuchzeri	Cottongrass										+				
E. vaginatum	Cottongrass												+		+
Scirpus acutus	Great Bulrush									+					
S. americanus	Three-square Rush									+					
TYPHACEAE (Cattail Family)															
Typha latifolia	Common Cattail									+					
ARACEAE (Arum Family)															
Calla palustris	Water Arum														+
JUNCACEAE (Rush Family)															
Juncus balticus	Wire Rush				+		+			+	+				
LILIACEAE (Lily Family)															
Allium textile	Prairie Onion	+			+				+	+					
Disporum trachycarpum	Fairy-bells						+	+	+	+		+	+	+	+
Maianthemum canadense	Wild Lily-of-the-Valley									+		+	+		
Smilacina racemosa	False Solomon's-seal				+		+			+	+		+		+
S. stellata	Star-flwrd. Solomon's-seal	+			+		+	+	+	+		+	+	+	+
S. trifolia	Three-lvd. Solomon's-seal														+
Streptopus amplexifolius	Twisted-stalk									+					
Tofieldia glutinosa	False Asphodel												+		
IRIDACEAE (Iris Family)															
Sisyrinchium montanum	Blue-eyed Grass	+			+				+	+		+	+		+
ORCHIDACEAE (Orchid Family)															
Calypso bulbosa	Calypso Orchid						+	+			+				+
Corallorhiza striata	Striped Coral-root Orchid						+								
C. trifida	Pale Coral-root Orchid						+	+		+				+	+

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Cypripedium calceolus	Yellow Lady's-slipper									+					
Habenaria viridis	Bracted Bog Orchid						+								
Orchis rotundifolia	Round-leaved Orchid										+				
SALICACEAE (Willow Family)															
Populus balsamifera	Balsam Poplar				+					+	+				+
P. tremuloides	Aspen Poplar				+		+			+	+				+
Salix spp.	Willows				+		+	+						+	+
S. bebbiana	Beaked Willow				+						+				
S. lutea	Yellow Willow									+					
S. myrtillifolia	Myrtle-leaved Willow									+					
BETULACEAE (Birch Family)															
Alnus crispa	Green Alder						+	+		+					
Betula glandulosa	Dwarf Birch						+	+							
B. occidentalis	Water Birch						+			+	+				
URTICACEAE (Nettle Family)															
Urtica gracilis	Common Stinging Nettle									+					
SANTALACEAE (Sandalwood Family)															
Comandra pallida	Pale Comandra	+			+	+			+	+		+	+		+
Geocaulon lividum	Northern False Toadflax						+	+						+	+
POLYGONACEAE (Buckwheat Family)															
Eriogonum flavum	Yellow Umbrella-plant		+												
Polygonum amphibium	Water Smartweed														+
P. lapathifolium	Green Smartweed														+
CHENOPODIACEAE (Goosefoot Family)															
Monolepis nuttalliana	Spear-leaved Goosefoot											+			
CARYOPHYLLACEAE (Pink Family)															
Arenaria spp.	Sandworts		+				+		+					+	+
A. capillaris	Sandwort												+		
A. lateriflora	Broad-leaved Sandwort									+		+			

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Cerastium arvense	Field Chickweed	+		+	+		+	+	+	+			+		+
C. vulgatum	Mouse-eared Chickweed			+						+					
Stellaria spp.	Chickweeds								+	+					+
S. longifolia	Long-leaved Chickweed									+			+	+	
S. longipes	Long-stalked Chickweed							+		+					
S. media	Common Chickweed											+			
RANUNCULACEAE (Crowfoot Family)															
Actaea rubra	Baneberry						+	+	+	+		+	+	+	+
Anemone canadensis	Canada Anemone									+					+
A. multifida	Cut-leaved Anemone	+			+	+	+	+	+		+				+
A. parviflora	Northern Anemone						+	+							
A. patens	Prairie Crocus	+	+		+	+	+	+	+	+	+				+
Aquilegia brevistyla	Blue Columbine								+			+			+
Caltha palustris	Marsh Marigold													+	+
Clematis verticellaris	Blue Clematis						+	+	+		+	+			
Ranunculus abortivus	Small-flowered Buttercup								+	+			+		+
R. acris	Tall Buttercup						+	+							
R. cardiophyllus	Heart-leaved Buttercup			+			+								
R. cymbalaria	Creeping Buttercup			+					+	+					
R. gmelinii	Yellow Water Crowfoot									+					+
R. inamoenus	Buttercup								+						
R. rhomboideus	Prairie Buttercup			+	+				+	+			+		
R. sceleratus	Celery-leaved Buttercup						+								
Thalictrum occidentale	Western Meadow Rue									+					
T. venulosum	Veiny Meadow Rue			+			+		+	+		+	+		+
FUMARIACEAE (Fumitory Family)															
Corydalis aurea	Golden Corydalis						+	+	+	+		+	+		+
C. sempervirens	Pink Corydalis														+

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CRUCIFERAE (Mustard Family)															
Arabis spp.	Rock Cresses				+		+	+	+						
A. divaricarpa	Purple Rock Cress				+		+								
A. hirsuta	Hirsute Rock Cress				+		+	+							
A. holboellii	Reflexed Rock Cress	+			+	+	+	+	+		+				
Brassica kaber	Wild Mustard											+		+	
Braya humilis	Braya				+	+	+				+				
Capsella bursa-pastoris	Shepherd's-purse							+	+	+		+	+	+	+
Descurainia pinnata	Green Tansy Mustard	+													
D. sophia	Flixweed	+					+		+	+		+			
Draba spp.	Drabas						+	+	+						
D. aurea	Golden Draba						+			+					
D. cana	White Draba						+								
D. incerta	Draba							+							
D. nemorosa	Annual Draba					+	+		+			+			
Erysimum chieranthoides	Wormseed Mustard							+							
E. inconspicuum	Small-flowered Rocket	+				+			+	+					
Lesquerella arenosa	Bladder-pod	+			+	+			+						
Physaria didymocarpa	Double Bladder-pod						+	+							
Rorippa islandica	Yellow Cress									+					
R. nasturtium-aquaticum	Yellow Cress							+							
Sisymbrium loeselii	Tall Hedge Mustard									+					
Thlaspi arvense	Stinkweed	+			+		+	+	+	+		+	+		+
CRASSULACEAE (Orpine Family)															
Sedum rosea	Rose-root Stonecrop						+								
SAXIFRAGACEAE (Saxifrage Family)															
Chrysosplenium iowense	Golden Saxifrage														+
Heuchera cylindrica	Alum-root							+							
H. richardsonii	Alum-root								+	+					
Mitella nuda	Mitrewort										+	+		+	+
Ribes americanum	American Black Currant								+	+		+			

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Ribes aureum	Golden Currant	+												+	
R. glandulosum	Skunk Currant											+			+
R. hirtellum	Wild Gooseberry									+	+	+		+	+
R. hudsonianum	Wild Black Currant						+	+		+			+	+	+
R. lacustre	Bristly Black Currant							+						+	
R. oxyacanthoides	Wild Gooseberry			+	+		+	+		+		+	+	+	+
R. triste	Wild Red Currant									+		+		+	+
Saxifraga bronchialis	Spotted Saxifrage						+	+			+				
S. oppositifolia	Purple Saxifrage						+								
S. tricuspidata	Prickly Saxifrage										+				
ROSACEAE (Rose Family)															
Amelanchier alnifolia	Saskatoon-berry	+	+	+	+		+	+	+	+		+	+	+	+
Crataegus chrysocarpa	Hawthorn								+			+			
Dryas drummondii	Yellow Dryad						+	+							
D. hookeriana	White Dryad						+	+							
Fragaria vesca	Woodland Strawberry						+	+	+						
F. virginiana	Wild Strawberry			+	+	+	+	+	+	+	+	+	+	+	+
Geum triflorum	Three-flowered Avens	+	+		+	+	+	+		+			+		
Potentilla anserina	Silverweed			+	+		+			+					
P. concinna	Early Cinquefoil				+	+	+		+	+					
P. fruticosa	Shrubby Cinquefoil				+			+							+
P. hippiana	Woolly Cinquefoil									+					
P. nivea	Alpine Cinquefoil										+				
P. norvegica	Rough Cinquefoil							+					+		
P. pensylvanica	Pennsylvanian Cinquefoil								+						
Prunus pensylvanica	Pin Cherry						+		+	+		+	+	+	+
P. virginiana	Choke Cherry	+							+	+		+	+		+
Rosa spp.	Wild Roses									+					
R. aciculariis	Prickly Wild Rose														
R. woodsii	Common Wild Rose									+					
Rubus acaulis	Dwarf Raspberry						+	+		+		+			+

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Rubus chamaemorus	Cloudberry														+
R. pubescens	Dewberry						+	+		+	+	+	+	+	+
R. strigosus	Wild Red Raspberry									+			+		
LEGUMINOSAE (Pea Family)															
Astragalus aboriginum	Indian Milk Vetch				+		+		+		+				
A. agrestis	Purple Milk Vetch									+		+			
A. bisulcatus	Two-grooved Milk Vetch	+								+					
A. caespitosus	Milk Vetch	+													
A. crassicarpus	Ground Plum	+			+					+					
A. drummondii	Drummond's Milk Vetch	+							+						
A. missouriensis	Missouri Milk Vetch	+													
A. pectinatus	Narrow-leaved Milk Vetch	+			+					+					
A. striatus	Striate Milk Vetch	+							+						
A. triphyllus	Cushion Milk Vetch	+			+										
Caragana arborescens	Common Caragana									+		+	+		
Hedysarum alpinum	Alpine Hedysarum				+						+				
H. mackenzii	Mackenzie's Hedysarum				+		+	+	+	+	+				+
H. sulphurescens	Yellow Hedysarum						+								
Lathyrus ochroleucus	Yellow Pea Vine						+		+	+		+	+	+	+
L. venosus	Purple Pea Vine									+					
Medicago lupulina	Black Medick	+						+							+
Oxytropis sericea	Early Yellow Loco-weed	+			+		+	+	+	+	+				
O. splendens	Showy Purple Loco-weed						+								
Thermopsis rhombifolia	Golden Bean	+	+	+	+	+									
Trifolium pratense	Red Clover								+	+					+
T. repens	White Clover											+			+
Vicia americana	American Vetch	+							+	+		+			+
V. sparsifolia	Narrow-leaved Vetch				+				+	+					
GERANIACEAE (Geranium Family)															
Geranium viscosissimum	Sticky Purple Geranium				+										

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POLYGALACEAE (Milkwort Family)															
Polygala paucifolia	Fringed Polygala														+
EUPHORBIACEAE (Spurge Family)															
Euphorbia esula	Leafy Spurge	+										+			
ACERACEAE (Maple Family)															
Acer glabrum	Mountain Maple						+								
RHAMNACEAE (Buckthorn Family)															
Rhamnus alnifolia	Buckthorn														+
VIOLACEAE (Violet Family)															
Viola adunca	Early Blue Violet		+	+	+	+	+	+	+	+	+	+	+	+	+
V. nephrophila	Bog Violet									+					+
V. nuttallii	Yellow Prairie Violet	+			+					+					
V. pedatifida	Crowfoot Violet				+					+					
V. renifolia	Kidney-leaved Violet						+	+						+	+
V. rugulosa	Western Canada Violet				+		+	+	+	+		+	+		+
CACTACEAE (Cactus Family)															
Mamillaria vivipara	Ball Cactus									+					
Opuntia polyacantha	Prickly Pear Cactus									+					
ELAEAGNACEAE (Oleaster Family)															
Elaeagnus commutata	Wolf Willow	+			+					+		+			
Shepherdia canadensis	Canada Buffalo-berry						+	+			+			+	+
ARALIACEAE (Ginseng Family)															
Aralia nudicaulis	Wild Sarsaparilla								+	+		+			+
UMBELLIFERAE (Carrot Family)															
Heracleum lanatum	Cow Parsnip									+					
Lomatium foeniculaceum	Prairie Parsley	+			+										
Musineon divaricatum	Yellow Prairie Parsley	+			+				+						
Zizia aptera	Heart-leaved Alexanders				+	+	+		+	+	+				

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CORNACEAE (Dogwood Family)															
Cornus canadensis	Bunchberry									+			+		+
C. stolonifera	Red-osier Dogwood			+					+	+		+	+		+
PYROLACEAE (Wintergreen Family)															
Pyrola asarifolia	Common Pink Wintergreen									+					
ERICACEAE (Heath Family)															
Arctostaphylos rubra	Alpine Bearberry							+							
A. uva-ursi	Kinnikinnick				+	+	+	+	+		+		+	+	+
Chamaedaphne calyculata	Leather-leaf														+
Ledum groenlandicum	Common Labrador Tea											+			+
Vaccinium caespitosum	Dwarf Bilberry						+								
V. myrtilloides	Blueberry											+			
V. vitis-idaea	Lingonberry											+			+
PRIMULACEAE (Primrose Family)															
Androsace chamaejasme	Sweet-flowered Androsace						+	+			+				
A. septentrionalis	Fairy Candelabra				+	+	+	+	+	+	+	+	+		+
Dodecatheon spp.	Shooting Stars						+	+		+					
D. conjugens	Shooting Star		+		+					+					
D. radicatum	Shooting Star				+	+				+	+	+			+
Glaux maritima	Sea Milkwort				+										
Primula incana	Mealy Primrose									+					+
P. mistassinica	Dwarf Canadian Primrose							+			+				
Trientalis borealis	Star-flower														+
GENTIANACEAE (Gentian Family)															
Menyanthes trifoliata	Buck-bean														+
POLEMONIACEAE (Phlox Family)															
Phlox hoodii	Moss Phlox	+	+		+				+						
BORAGINACEAE (Borage Family)															
Cryptantha bradburiana	Cryptanthe	+													
Cynoglossum officinale	Hound's-tongue	+													

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Lappula echinata	Blue-bur														
L. redowskii	Western Blue-bur	+							+	+					
Lithospermum incisum	Narrow-leaved Puccoon	+			+	+		+							+
L. ruderale	Woolly Gromwell				+		+	+	+		+				
Mertensia paniculata	Tall Lungwort									+		+	+	+	+
LABIATAE (Mint Family)															
Clecoma hederacea	Ground Ivy									+					+
Mentha arvensis	Wild Mint									+					
SCROPHULARIACEAE (Figwort Family)															
Castilleja miniata	Common Red Paintbrush						+	+							
C. raupii	Northern Pink Paintbrush														+
Collinsia parviflora	Blue-eyed Mary							+							
Penstemon nitidus	Smooth Blue Beard-tongue	+			+		+		+	+					
P. procerus	Slender Blue Beard-tongue									+					
LENTIBULARIACEAE (Bladderwort Family)															
Pinguicula vulgaris	Common Butterwort							+							
PLANTAGINACEAE (Plantain Family)															
Plantago major	Common Plantain							+							
RUBIACEAE (Madder Family)															
Galium boreale	Northern Bedstraw									+					+
CAPRIFOLIACEAE (Honeysuckle Family)															
Linnaea borealis	Twin-flower							+		+		+			
Lonicera dioica	Twining Honeysuckle									+					+
L. involucrata	Bracted Honeysuckle											+	+	+	+
L. tartarica	Tartarian Honeysuckle											+			
L. villosa	Fly Honeysuckle														+
Sambucus pubens	Red Elderberry											+			
Symphoricarpos occidentalis	Buckbrush									+					
Viburnum edule	Low Bush Cranberry											+	+	+	+
V. trilobum	High Bush Cranberry													+	

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ADOXACEAE (Moschatel Family)															
Adoxa moschatellina	Moschatel													+	+
COMPOSITAE (Composite Family)															
Achillea millefolium	Common Yarrow									+					
Antennaria spp.	Pussytoes, Everlastings						+			+					
A. dimorpha	Prairie Pussytoes				+					+					
A. neglecta	Broad-leaved Pussytoes					+	+	+	+			+		+	
A. nitida	Small-flowered Everlasting	+			+	+	+	+		+		+		+	
A. parviflora	Low Pussytoes				+		+			+			+		
A. pulcherrima	Showy Everlasting									+					
A. rosea	Pink Pussytoes				+	+		+	+				+		
Arnica cordifolia	Heart-leaved Arnica						+	+							
Aster Brachyactis	Rayless Aster									+					
Crepis tectorum	Annual Hawksbeard														+
Erigeron caespitosus	Tufted Fleabane									+					
E. compositus	Cut-leaved Fleabane						+	+			+				
E. glabellus	Smooth Fleabane												+		
Hymenoxys acaulis	Butte Marigold	+													
H. richardonii	Colorado Rubber-plant	+													
Matricaria matricarioides	Pineapple-weed												+		
Petasites palmatus	Palmate-leaved Coltsfoot						+	+							+
P. sagittatus	Arrow-leaved Coltsfoot						+	+					+	+	
Senecio canus	Prairie Groundsel	+						+	+						
S. congestus	Marsh Ragwort							+	+						+
S. vulgaris	Common Groundsel									+					
Taraxacum ceratophorum	Dandelion									+			+		+
T. officinale	Common Dandelion	+			+	+	+	+	+	+	+	+		+	+
Townsendia sericea	Low Townsendia					+	+	+	+						

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All maps and charts should be submitted on 8-1/2 x 11" white bond. Please indicate in light pencil any data which is to be typed on charts, maps, etc. Black and white photographs, slides or drawings are welcomed for use in regular issues of the AN.

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